

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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## Manufacturers' Record.

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BALTIMORE, MARCH 9, 1905.

While the plans for the consolidation of leading Alabama coal and iron interests have in some respects been temporarily delayed, the general work is progressing satisfactorily. It was not to be expected that an undertaking of such vast magnitude could be carried through without some hitches and some delays, but the movement is well under way and it is quite certain that it will be carried out successfully. A vast amount of work has already been accomplished, and the entire country has been awakened to the unlimited possibilities of the coal and iron regions of Alabama.

### THE SOUTH'S ADVANTAGE.

The general trend of business development today is more pronouncedly in favor of the South than ever before. In every direction there are signs of advancement. Starting with the mineral regions of Virginia and West Virginia, where there is remarkable activity in coal and iron interests, on down through Kentucky and Tennessee to Alabama, where coal and iron activity is greater than ever before, with plans under way for developments which will make the South a leader in metallurgical progress, to New Orleans and Galveston, where the export grain trade of the country is now centering, there is in every direction improvement and advancement. Cotton-mill interests are getting in better shape; water-power developments are under way at many points, especially in the Carolinas, including the immense undertaking at Yadkin Falls, N. C., by Pittsburg capitalists; here and there immigration is sufficiently marked as to be commanding much attention. Five or six years ago, when the great boom of that period swept over the country, the South had scarcely commenced to emerge from the depressing effect of years of low-price cotton and the agricultural poverty which that condition had brought about. Its iron interests were not in a position to get the benefit, except to a limited extent, of the prosperity in iron and steel, and so the great wave of activity had almost passed away before

higher-price cotton and improvements and consolidation in iron and coal and railroad developments had put the South in a position to reap the same rich harvest that other sections gathered. But now the conditions are different. The big profits on two or three years' cotton crops sold at high prices brought such financial strength to the farmers as to enable them to hold this crop back from the market to the despair of the bears, and the iron interests, developed by new and modern improvements and by the building of new furnaces and steel works, are in shape to enjoy the present prosperity in that trade and to justify further developments on a very large scale. Thus the South enters this period of industrial activity in a far better shape than before, and in the next five years we shall see more real wealth created there and a greater volume of business than in the last 10 years. We shall now do in five years much more than we have done in the past ten. That is the assured progress ahead of the South.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 62, 63 and 64.

### HEAVY PURCHASES OF RAILROAD EQUIPMENT.

Preparations are being made by the railroad companies to handle a vastly-increased amount of business. Since the first of this year, now only two months old, announcements have been made by a number of prominent corporations working either wholly or partly in the South that very large sums will be expended, principally for motive power and rolling stock, but partly for rails, and thus far the disbursement of more than \$65,000,000 for these purposes by 19 roads is in sight. This will cover 1261 locomotives, 46,000 freight cars and more than 200 passenger-train cars. In the estimate little orders have not been considered, notwithstanding that a number of companies have decided to purchase here and there several engines or cars. All the money is to be spent this year, and none of the equipment is to be finished later than next fall, when it will be required to handle the traffic of the autumn months, although much of it will be delivered earlier, some as soon as April.

In sheer magnitude the appropriation made by the Pennsylvania system for the purposes here outlined is stunning. The sum of \$23,000,000 will be expended by that corporation alone, which will purchase and build between 500 and 600 engines and will buy more than 15,000 freight cars. To one locomotive factory the company has given the contract for 325 engines, but the building of 200 more locomotives is to be done either at the company's shops or at the works of other manufacturers. This number may be increased before summer, according as the outlook for traf-

fic directs. The expenditures to be made by the Baltimore & Ohio Railroad are also huge. That company will buy 250 engines and 10,000 freight cars, besides 48,000 tons of rails, all costing approximately \$14,000,000. The rail contracts have been let and those for equipment will soon be awarded. The Southern Railway, the Santa Fe system and the Southern Pacific will pay out approximately \$6,000,000 each for cars and locomotives. The Southern, for instance, has given orders for 79 engines and 5000 freight cars, the Santa Fe for 75 engines and 5300 freight cars, besides some passenger coaches, and the Southern Pacific for 100 engines and 1600 freight cars, besides cars for passenger trains. It has also let heavy rail contracts. The Alabama Great Southern, the Chesapeake & Ohio, the Kansas City, Mexico & Orient, the Missouri Pacific and the Western Maryland are to spend \$1,000,000 each for cars and engines or both. The Frisco system will disburse about \$1,500,000 and the Norfolk & Western \$2,000,000 for the same purposes. Smaller orders are reported by the Central of Georgia, the Chattanooga Southern, the Cincinnati, New Orleans & Texas Pacific, the Mobile, Jackson & Kansas City, the St. Louis Southwestern, the Seaboard Air Line and the Virginia Southwestern, but some of these will probably be increased before the year is much older. Moreover, all the rail purchases in the South are not here covered, for some of the companies have not yet announced their contracts for the current year, while others gave their orders in 1904 for delivery in 1905, as heretofore reported. Those here noted are new contracts.

The reason for these liberal disbursements in the purchase of equipment is made apparent by the monthly statements of the railroad companies, all of which here mentioned are showing steady and rapid growth of business. No doubt also that railroad managers are fearful of being again caught short of facilities as they were two years ago, when a swift increase in the volume of traffic found most roads, including some of the richest, quite unprepared to handle it, so that the congestion of freight at certain points was appalling, even to traffic men of long experience. That predicament then caused the companies to flood locomotive builders with orders, and the factories were worked to their full capacity to provide motive power as speedily as possible, yet by no means with sufficient rapidity to meet requirements. Car manufacturers were likewise overwhelmed with contracts all pressing speedy fulfillment, and for the nonce it seemed as if the works devoted to the construction of railroad equipment were unequal to supply the normal demands of the country. The outlook for this year indicates that the drain upon the equipment resources of the roads will be larger than ever, yet they will apparently be able to accept and handle all business offering, inasmuch as they have taken time by

the forelock by early placing their orders with manufacturers.

Warrant for these anticipations of heavy traffic for 1905 is found in the figures reported by Poor's Manual, which shows that during the five fiscal years from 1899 to 1903, inclusive, there was a steady gain in both gross and net earnings of railroads in the United States as a whole. The figures for the fiscal year of 1904 are not completed, but estimates based upon the reports of a large number of companies show that it will display gains over 1903, notwithstanding a temporary period of depression following the boom times, which had given such a sudden and tremendous impetus to the business of transportation. Nor is this all, for while here and there throughout the country during the temporary slackening of commerce groups of railroads showed decreases in earnings for some months as compared with the previous year, lines in the South have practically without exception displayed increasing progress and growth. This section was scarcely affected by the reaction, and its natural development has continued without check. It now enjoys the promise that 1905 will bring it still greater prosperity and will incidentally enable its railroads to more than maintain their records of success.

### WHAT MIGHT HAVE BEEN AND WHAT MAY BE.

In the midst of discussions of ways and means to enable men still holding portions of the cotton crop of 1904-1905 to realize for it prices obtained by those who sold their cotton before the slump of December last, and at the same time to encourage a reduction in the acreage for the crop of 1905-1906, there are contentions now and then about the policy pursued as to the last crop, and here and there attempts to hold this or that influence responsible for the extraordinary crop indicated by the government reports. Such contentions lose sight of the fact that in the early days of the last season, at planting time in 1904, the South was warned against increasing the acreage unduly or planting for more than a certain number of bales, but warned in vain, inasmuch as it is almost second nature for farmers of all kinds to respond to the impulse of high prices for their products one season by enlarging their operations in those products the subsequent season. This impulse is hard to be resisted in other lines of human industry more susceptible to organized understanding and co-operative action than the planting interest. That the slump in price, following the figures presented by the government early in December, but undoubtedly accentuated artificially through a long-sustained campaign by the bear element in the cotton markets, did not affect the South as a whole disastrously, however individuals may have suffered, was clearly explained in the series of letters from about a thousand bankers in the cotton belt setting forth the actual conditions of their customers and neigh-

bers. It ban'ed upon the comfortable position of thousands of growers because of the good prices received for two or three preceding crops and upon the greater attention given to diversification of crops, notwithstanding the large crop of cotton. The summary of the situation revealed in the bankers' letters was made in the MANUFACTURERS' RECORD three weeks ago, and may be repeated as follows:

With few exceptions Southern farmers have been brought face to face with that natural and logical relief from constantly-recurring cotton bothers, and all along the line preparations are under way for a "hog-and-hominy career" and for "living at home and boarding at the same place," to say nothing of permanent occupation in the growing of other crops than cotton. Grain, fruit and stock in Alabama; fruit, corn, hay, strawberries, vegetables and poultry in Arkansas; peanuts, potatoes, alfalfa, truck and stock in Texas; spring oats and wheat and home-made bacon, with tobacco, early truck, berries and vegetables in South Carolina; Irish potatoes, peas, strawberries in North Carolina; peaches and cantaloupes in Georgia; sugar-cane in Mississippi, rice in Louisiana, and tobacco and stock in Tennessee are the ends now to be sought, while there is noticeable a steady change under way toward making home supplies. This will be accelerated by the attitude of banks, some of which are impressing upon planters the importance of very economical outlay and an increase in production of foodstuffs and feedstuffs. Recent events have brought banks, merchants and farmers into closer relations and to a recognition of the identity of their interests. While naturally holding back upon the thriftless class, and in certain contingencies refusing to aid planters who will not reduce the acreage, the banks are inclined to be liberal. They recognize that the farmer is alive to his own interests, and often where they would be inclined to encourage a reduction do not find compulsion or threat necessary, as the thing is being done voluntarily.

Much of the last crop now held in the hands of the larger growers, who are thoroughly capable of taking care of themselves, and being men of property, can get all the accommodations they require for another crop. Other cotton is in the hands of county merchants and local cotton speculators, but the quantity cannot be determined. While many small farmers sold early and got fair prices, enabling them to settle with the merchants and with the banks, thus putting them on a good basis for another crop, there are many small lots of from one to ten bales held which will come upon the market with an increase of a couple of cents in the price.

The ability of the farmers to make another crop independently of the banks, with the aid of the banks inclined to help to a reasonable degree, or through the strong aiding the weak, appears to be generally good throughout the South, especially in the Gulf and trans-Mississippi States. For many are in better shape than they have ever been, and are pictured in such phrases as "better financial conditions than ever in the history of the State," "in this section free for years from all forms of crop mortgages and liens," and "some have enough surplus money accumulated during the past three years that they are able to carry their own cotton."

Another fact which has not been given the weight which it probably deserves was the ideal and almost unparalleled boll-making quality of the season of 1904-1905, reinforced, as has been pointed out, by the plant-food left in the soil in consequence of the imperfect growing conditions of the preceding season. Reports from different quarters in the South have told of a considerable increase of lint cotton to the boll approaching from 38 to 40 or more pounds of lint to the hundred pounds of seed cotton. What was the extent of this increased percentage it would be difficult to estimate, but that it had a marked influence upon the total of the crop cannot be doubted. To the lay mind, however, comes this suggestion: If the imperfect growing season of 1903-1904 left in the soil plant-food for the making of the unprecedented bolls of 1904-1905, did not the ideal growing conditions of 1904-1905 make greater drains than usual upon the soil? If this be so, is there not danger that too

much stint in the use of fertilizer, both upon reduced cotton acreage and upon a greater acreage given to other crops, may result in the coming crop being a costly one, even though the price of raw cotton may advance? The safe rule, and it cannot be repeated too often, is for the individual grower to plant just as much land in cotton as his facilities for cultivating and gathering permit after he has seen to it that his corn-crib and his larder shall be filled from home resources to the best of his ability.

#### GREAT BRITAIN'S COAL SUPPLIES.

Industrial Britain is rejoicing over the report of a royal commission appointed three or four years ago to inquire into the coal supplies of the United Kingdom and upon matters relating thereto. For several years there had been apprehension about the ability of Great Britain not merely to maintain its export trade in coal, which means so much for it in many directions, but even to command at home the fuel necessary to the sustenance of its home industries. A commission appointed 35 years ago reported that the available resources of the United Kingdom in seams of coal at least one foot thick and situated within 4000 feet of the surface amounted in 1871 to 90,207,285,398 tons. Since then up to December 31, 1903, at which point the studies of the latest commission ended, 5,694,928,507 tons of coal have been mined. Yet this commission, adopting 4000 feet as the limit of practical depth in working and one foot as the minimum workable thickness of the coal, estimates the available quantity of coal in the proved coal fields of the United Kingdom to be 100,914,668,167 tons, showing that the commission of 1870 underestimated the available resources by nearly 16,000,000,000 tons. Moreover, the commission estimates that in the proved coal fields at greater depths than 4000 feet are 5,239,433,980 tons which may or may not be recoverable, and that in unproved fields 39,483,000,000 tons are available, making a total of 145,637,102,147 tons. The present annual output is about 230,000,000 tons, that point having been reached through an average annual increase of 2½ per cent. during the past 30 years, while the increase in exports has been about 4½ per cent. annually in the same period. If there should be no further increase in the output or in exports, the United Kingdom has enough coal in sight to last more than 400 years, which carries the mind beyond the time which should concern any royal commission of today. But the Allerton commission says:

It is the general opinion of the district commissioners that owing to physical considerations it is highly improbable that the present rate of increase of the output of coal can long continue; indeed, they think that some districts have already attained their maximum output, but that on the other hand the development in the newer coal fields will possibly increase the total output for some years. In view of this opinion, and of the exhaustion of the shallower collieries, we look forward to a time, not far distant, when the rate of increase of output will be slower, to be followed by a period of stationary output and then a gradual decline.

For that reason the commission, in the course of its examination of 120 skilled witnesses, considered possible economies in the use of coal-cutting machines and of electricity for the transmission of power, in the preparation of coal for sale or use, in the manufacture of coke and the use of by-products of the ovens, in the manufacture of briquettes in the production of power, especially as related to the use of automatic stoker, mechanical drafts, the

purification of boiler water, the fitting of steamers with turbines and the use of powdered fuel, in the use of gas for engines and in the employment of alcohol, peat, natural gas, oil, water-power and wind-power as substitutes for power generated from coal. As to the last point the conclusion of the commission is that while some possible sources of power may slightly relieve the demand for coal, there is no real substitute for coal, and it is the only reliable source of power for the United Kingdom. Therefore, the commission has no doubt of the wastefulness of existing methods in coal consumption and of the necessity for economy. It says:

Vast as are the available resources, it must be borne in mind that a large percentage of them are of inferior quality or are contained in deeper and thinner seams which cannot be worked at the present cost. It is true that in the past the introduction of economies has not tended to decrease the consumption of coal, but we anticipate that as the cost of mining increases the advantage of using fuel with greater care will become more apparent and considerable economies will naturally follow.

That there will be no immediate reduction in the amount of coal exported was obvious to the commission in the opinion of its witnesses that the maintenance of a large coal export trade is of supreme importance to the country and essential to the prosperity of the coal-producing districts, it being pointed out that coal is so essential an element of outward cargoes that any diminution of coal export must cause a rise in the import freight on goods, and that a large quantity of the coal exported is destined for the use of British ships going abroad. Accompanying such use of coal directly in commerce is its use in the navy, now become of prime importance in the maintenance and expansion of the country's foreign trade. Here, too, consumption has rapidly increased, but there is reason to believe, according to the commission, that ultimately there may be a saving through the use of oil fuel for auxiliary purposes in men-of-war, internal-combustion engines, working with volatile oils, having already been successfully introduced for the propulsion of small vessels.

A glance is given at the competition in world coal trade of other countries, especially Germany, with the resources and scientific methods of the Westphalian Syndicate, aided by preferential railway tariffs and cheap water carriage, and the United States, which have as yet affected only distant British markets, but which might, with American production outstripping American demands, establish a large coal export trade for the disposal of the surplus.

This report is not only valuable to Great Britain in relieving its mind from apprehension of a possibility of sudden diminution in the sources of its industrial power, but as an example of foresighted stocktaking it is suggestive to the younger coal producer, America, which in some respects, as far as coal is concerned, is yet to be discovered.

Mr. W. L. Spencer, secretary Spencer & Hall Company, typefounders and electrotypers, Baltimore, Md., writes to the MANUFACTURERS' RECORD as follows:

We thought it would be of interest to you to know that through our advertisement in the MANUFACTURERS' RECORD we have secured a sale of a complete printing plant for a very large burlap-bag factory now being started in Florida. Had it not been for the advertisement we would never have even known that a plant of the kind was to have been installed, and how unfortunate for us had we not renewed our yearly contract! It is very evident that buyers have entire confidence in the MANUFACTURERS' RECORD's advertisers, for we are not such a great big concern, but the cash came along with the order.

#### PROFITABLE INVESTMENT FOR SOUTHERN STATES.

Discussing the part to be taken by a State in expediting the development of its mineral resources, a matter which is attracting especial attention in Victoria, Australia, the *Engineering and Mining Journal* says:

From an acquaintance with the official geologists of the Australian States and the members of our own survey, we feel that at the root of the disorganization discernible, no less here than at the Antipodes, is the fact that the contrast between the earning capacity of a capable geologist and that of an efficient professional man in other walks of life is too marked, the result being either that the geologist ekes out a precarious living by dabbling in matters outside his ken, or he abandons his career as a geologist to obtain a better livelihood elsewhere. Such conditions tend to kill scientific enthusiasm without creating professional spirit, and introduce a commercialism into scientific work which robs it of its highest attainment. In Victoria, as in the United States, we would like to see the work of our scientific men better appreciated and more properly compensated, and it would be well if they in return ceased wandering after strange gods, more especially the golden calf, and gave themselves up more sincerely to the beneficent labors to which they are dedicated.

These comments of a general character may be applied particularly to the southern portion of the United States, where, in many instances, only a beginning has been made in the proper study under State auspices of geological riches. Notable work has been done, it is true, by Maryland, West Virginia, Georgia, Alabama and Texas, while good beginnings have been made in such States as the Carolinas, Louisiana and Virginia, and the revival of a survey in Kentucky promises to accomplish much for that State. Considering the limitations as to money available for the prosecution of the productive task, results have been eminently satisfactory. But they are by no means within the compass of the possibilities of thoroughly-organized geological surveys liberally encouraged by State appropriations. In co-operation with the United States Geological Survey they have done much to point the way to economic exploitation of coal, iron, phosphates, sulphur, zinc, lead, clays, building stone, etc., in industry. But the fact remains that there are vast underground stretches of the South still an undiscovered country. The sooner the scientific explorer is enabled to map those regions, the sooner will the South come into its own. Southern States already having geological surveys should strengthen their intelligent work at every turn, and those without them should establish them in the knowledge that probably no better investment may be made by a State.

#### CRUELTY TO AN ANIMAL.

It has been left for General and Lieutenant-Governor Curtis Guild, Jr., of Massachusetts—presuming that his is still the guiding mind of the *Commercial Bulletin* of Boston—to discover, in the decision of Congress to return captured battle-flags to Southern States, a reason why the South by socialistic legislation should relieve Massachusetts of what he calls punishment "for her humanitarianism." General and Lieutenant-Governor Curtis Guild, Jr., is exercising his favorite nightmare too frequently for the health of any self-respecting animal. He used to ride it only once a year, or at most twice a year, before he became the Orator of the Massachusetts State administration. Now it's a case of once a month. Too bad, too bad. To think of trying to hang a materialistic bargain about an imaginary form of competition in cotton manufacture upon a fine sentiment in the return of battle-flags!

## THE COTTON MOVEMENT.

During the first six months of the present cotton season, according to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight was 9,604,748 bales, an increase over the same period last year of 875,502 bales; the exports were 5,711,627 bales, an increase of 792,149 bales; takings by Northern spinners 1,519,039 bales, a decrease of 221,790 bales; by Southern spinners 1,320,853 bales, an increase of 70,194 bales. It is interesting to note the changes which have occurred in these comparisons since the turn of the year. At the close of December the amount of cotton brought into sight since September 1 was 1,079,282 in advance of the movement for the first four months of the preceding season; the exports were 571,206 bales in excess, the takings by Northern spinners 120,339 bales in excess and the takings by Southern spinners 80,010 bales in excess. One month later the excess of the movement into sight had fallen to 961,139 bales, the excess of imports had advanced to 643,016 bales and of takings by Southern spinners to 87,829 bales, while the takings by Northern spinners showed a decrease of 83,408 bales from the takings of the first five months of the preceding season. This decrease now amounts to 221,790 bales. There is a further halting of the movement into sight amounting to more than 85,000 bales in one month; Southern mill takings are also inclined to halt, while the exports alone show an unbroken increase. It would be interesting if it were possible to trace the connection between these manifestations and the influences flowing from the January convention of the cotton-growers at New Orleans.

## INCURABLE.

In explanation of an unfortunate condition now apparently become chronic, and in natural devolution now confined chiefly to the columns of the *Presbyterian Standard*, published at Charlotte, N. C., the MANUFACTURERS' RECORD need only to recall two facts. In its issue of December 2, 1904, the *New York Times* published a statement signed by A. J. McKelway, containing the following:

"There has been so much exaggeration of the facts about child labor in the Southern States that even the intelligent linotype in *The Times* office must have thought that the figures given by me lately to Mr. Stevenson were too small."

In a letter to the editor of the MANUFACTURERS' RECORD under date of December 31, 1904, A. J. McKelway, referring to this statement in the *New York Times* of December 2, said:

"I wanted to let down the reporter, who was trying to do us a service, as easily as possible, and so made the linotype suggestion."

Yet the editor of the *Presbyterian Standard* expects the MANUFACTURERS' RECORD and other lovers of truth to take his imaginings seriously. He is incapable of understanding that he has discounted himself as a judge of truth.

The *Presbyterian Standard* should know that no reputable paper can join issue with its editor in polecat polemics.

## THE INLAND WATERWAY.

The speeches made in January at the interstate banquet of the Wilmington (Del.) Board of Trade in promotion of an open free ship canal connecting the Delaware river and Chesapeake bay have been published in pamphlet form. Judge George Gray presided at the banquet and the speakers included Messrs. Anthony Higgins and Alfred Crozier of Delaware, Charles E. Smith of Pennsylvania, Blanchard Randall of Maryland, John Cadwalader of Philadelphia, L. I. Handy

of Wilmington and Congressmen Lacey of Iowa, Lamb and Jones of Virginia and Gardener of New Jersey. The speeches emphasized the importance of the improvement of the canal under the auspices of the general government for national defense and commerce as part of the proposed inland waterway along the Atlantic seaboard.

## MISSISSIPPI LEVEES.

Everyone interested in the improvement of the Mississippi river will find profit in reading "Notes on the Alluvial Valley of the Mississippi River and on the Levee System Built to Protect It from Overflow," prepared by Arsene Perrilliat, a member of the board of State engineers of Louisiana. Within the compass of 24 pages Mr. Perrilliat presents a mass of information about the work already done by State, national and local authorities and a mass of data pointing the way to a completion of the improvements. Mr. Perrilliat's conclusions are as follows:

"In conclusion I will state as a result of my experience of 15 years in levee construction on the Mississippi river that I believe a levee system can be constructed which will protect the Mississippi valley from overflow. It is only a question of money, endeavor and time. The fertility of the soil and the general resources and richness of the alluvial lands justify this great expenditure, and as a business proposition the Mississippi valley, when thoroughly protected, will be one of the most valuable assets of the United States. As it is now, only partially protected, it is the home and source of wealth of millions of our citizens. Every year floods of increasing intensity are poured down upon it by the drainage of our country, yet the inhabitants of the valley struggle manfully against them. They clamor for assistance from the general government to protect them from a scourge rendered more terrible each year by the development of the country, yet while hoping that this help will come some time in a measure commensurate with their needs and the disaster inflicted, they do not remain idle, but work to the full extent of their means and ability. They are entitled to the strong assistance of the federal government and they trust that in due time it will be forthcoming."

With this interesting publication is given a historical sketch of the levees of the Mississippi compiled by Mr. John M. Parker of New Orleans, energetic in furthering measures for the improvement of the river.

## FACTS ABOUT FLORIDA.

Under an act of the legislature of 1901 the Florida department of agriculture, Mr. B. E. McLin, commissioner, has issued in the interest of immigration a comprehensive pamphlet descriptive of the climate, soil, resources and natural advantages of the State. Facts and figures are brought down to date to demonstrate the agricultural, manufacturing and commercial opportunities of the State in general, together with more detailed information by counties. In collecting material for the pamphlet the department consulted the county commissioners of each county, as well as many of the best informed persons on special lines in the State, and the result is a publication which will be found of great value by persons who wish to make their home in Florida, whether general farmers, gardeners, fruit-growers, stock-raisers, lumbermen or merchants.

The Florida East Coast Railroad has contracted for coal for its locomotives and steamers taken from mines along the Tennessee Central Railroad. A large number of mines are being opened north of Chattanooga and west of Knoxville.

## THE SOUTH AGAINST EDUCATIONAL MENDICANCY

[Charleston (S. C.) News and Courier.]

The Rev. Dr. William E. Hatcher of Richmond is one of the most influential Baptist ministers in the South. He has been among the foremost in the educational work of the great denomination with which he is connected, and there will be none to question the sincerity of his convictions on educational as well as on other subjects touching the welfare of the Southern people, and he speaks as one having authority. He writes to the *Baptist Argus* of Louisville, Ky., as follows:

"We desire with unimpassioned spirit to express what we have felt from the beginning, that the Ogden movement, so trumpeted and glorified at first, has little in store for the white people of the South. The golden and radiant optimism of some of our educators has been a trial to us. Their ardor in dancing attendance upon the picturesque junketers as they swing and glitter now and then through the South has been well meant, but without refreshment to the public. Those denominational schools which are disposed to scramble for every crumb which falls from the rich man's table had as well take off their Sunday clothes and get back to their regular work. It is vain to trust in princes—especially for Baptists to trust in the monarch of money. We are out of run with the Ogden caravan, and we need not hope, and ought not to desire, that there should be one dollar in store for our mendicant hands. The fact is, the Baptists have passed the mendicant stage, and any movement that gives them the beggar feeling is to be deplored."

The *Charlotte Observer* shouts "Glory to the Baptists!" and wishes that "all Southern people might put off the garments and the mien of mendicancy and become imbued with the same self-reliant spirit," and then it discourses upon a question of immediate importance to the South in these words:

"Forty years ago is when the South needed alms, if it ever did or ever will, but no alms were forthcoming then, and the generation coming on at that time grew up in ignorance. But it is the active force of the South today, and the ignorant poor whites of 1865 have got together enough stuff to give some sort of an education to their own progeny and to the little niggers, too. That the gods help those who help themselves was never more abundantly demonstrated than it is in the fact that it was not until the South got on its feet by its own efforts and proved itself able to stand alone that the well-meaning Pullman-car philanthropists turned their benevolent eyes toward this section and beamed upon it. We wonder, by the way, how it is with the neighbors and employees of the propagandists who come into the South with schemes of reform of a miscellaneous character? If some of the stories which pass about from mouth to mouth are true, reformation and philanthropy might well begin in the land that the reformers and philanthropists come from."

The next appearance of the "well-meaning Pullman-car philanthropists" . . . will be made in this State at Columbia some time during the month of April, and we are sure that they will have a great time. They are to stop in Charlotte on their way down here to tell us how to run our educational affairs, and we shall doubtless have marvelous reports of the wonderfully uplifting effects of their missionary work in partibus infidelium. It is not worth while warning our people against the insidious approaches of those who are thus trying to make a conquest of Southern opinion. We have made encouraging progress, in spite of the unfriendly attitude of the prime movers in this under-

taking, and our hope for the future depends upon the spirit of self-reliance and self-respect.

[Norfolk (Va.) Virginian-Pilot.]

Dr. Wm. E. Hatcher of Richmond, in discussing the Ogden movement in a letter in the *Baptist Argus*, published in Louisville, Ky., says that the radiant optimism of some Southern educators has been a sore trial to him. He refers to them as dancing attendance upon "picturesque junketers," and expresses something very nearly akin to disgust at the spectacle. He particularly emphasizes the fact that Southern people have passed the mendicant stage.

The *Virginian-Pilot* said when the so-called Ogden movement was inaugurated that it proposed to keep an open mind with regard to the matter and judge it upon its merits or demerits as they might appear.

The movement has now been under way for several years. If it has accomplished any practical good we have failed to observe it. It has, to be sure, created in the minds of Southern educators of a certain kidney an attitude of expectancy that can but impress unfavorably every observer of it. So far as we can see, the movement has degenerated into practically a propaganda for the education of the negro along wrong lines, although we by no means intend to impugn the motives of the men who started the movement and have been instrumental in pushing it. At the same time we are of the profound conviction that the South does not need it, and that it would be better off if the movement were dropped altogether. It is quite capable of taking care, in the progress of time, alike of the whites and blacks in the matter of education, whereby it will escape also the inoculation of its people, particularly the negro, with false ideals, whilst preserving its self-respect unimpaired.

As the *Charlotte Observer* says in commenting on the same utterance of Dr. Hatcher, the time when the South needed help, if it ever did, from the North was just after the war. Since that time, by applying themselves to the hoe and plow-handle, the so-called "poor whites" of the South have made a living for themselves and have given the children of the after-war generation the rudiments of an education that promises to find its fruition in the next generation in high-school and college education. In doing this the South has preserved its own ideals. It has learned the stern lesson of self-reliance. It has learned to overcome obstacles and battle with difficulties; and now, when its unaided triumph over all obstacles is assured, it can ill afford to even seem to ask help from any outside source whatsoever.

The whole case of the relations between the North and South can be summed up in a very few words, so far as the South is concerned, and these words are, "let us alone." The white people of the South can look out for themselves and look out for the negro. They want neither charity nor philanthropy when accompanied, as they usually are, by mistaken ideas of our people and our purposes.

We should not go so far as to say that the Ogden movement was foredoomed to failure. Possibly it might have succeeded in the accomplishment of its ends, but the fact remains that it has not.

The visit of Governor Heyward of South Carolina to New York in February and his speech on immigration before the North Carolina Society of that city has attracted much attention to South Carolina.

## JAPANESE MIGRATION TO THE SOUTH.

[Special Correspondence Manufacturers' Record.]

Palm Beach, Fla., March 2.

The constantly-recurring establishment of small Japanese colonies in the Southern States that is now being noted in casual press dispatches portends an immigration movement of much greater magnitude and importance than is generally suspected.

Some three months ago I had the pleasure of spending several hours each day for three days in company with Mr. S. Shimizu, the representative of the Japanese government, stationed at Chicago, and learned from him some things that will no doubt prove of more than passing interest to the people of the South. I met Mr. Shimizu in New Orleans while en route to the Southwest, where a number of Japanese have recently settled. I found him to be a man of intelligence, education and to possess a clear-cut business judgment and a grasp of American conditions that to me, at least, was surprising. He was away from his official post on an official mission, and was working it out on a well-defined plan with a foundation of facts that were remarkable.

After several meetings and conversations with Mr. Shimizu, at my request he consented to tell me what the purpose of his visit to the South was and what idea on the part of his government (for, as already stated, he was traveling officially) prompted it. He did not give me permission to publish everything that he told me, but he had no objection to the general purpose of his visit being made known.

Mr. Shimizu said that he had been sent into the South by order of his government to investigate the soil, climate and general agricultural conditions of the section for the purpose of ascertaining what the opportunities were for his people to find desirable homes and money-making opportunities better than those that they enjoy in their own country. He showed me pages of carefully-prepared statistics on the subjects under investigation and explained that his purpose was to verify them, that they might be given out at the proper time to his people with authority and without question. In his polite and suave manner, with a significant bow and smile, he said: "You know we Japanese think first, verify second and act third or not at all."

"You know," he said in the same conversation, "that we are going to win this war, but we are not counting on doing it within three or four years, but when we do, as is always the case at the end of such struggles, many important changes will be made in our affairs; and with the foresight that I think you will give us credit for, we are looking ahead for the new conditions that will follow. There will be many pensioners on our rolls and the government will be under obligations to thousands of its heroic subjects, and every effort will be made to throw all material advantages possible in their way."

"From the agricultural and labor statistics which we have in hand, the fertile and undeveloped fields of the Southern States offer many attractive opportunities to the industrious Japanese farmer more favorable than those he has at home, and if investigation bears them out to the satisfaction of the government, they will be made known to our people and every facility furnished to take advantage of them. Quite a number of Japanese are already located in the South, and it is my purpose to find out what line of agricultural industry they are pursuing, and what their success and prospects are."

"Do you think that there will be a general Japanese immigration movement to

the South?" I inquired of Mr. Shimizu.

"No, not in the sense that you Americans term 'general movements' for the present. A few of our experienced and reliable farmers will locate in different sections of the Southern States and make a thorough test of conditions and opportunities, and if these prove satisfactory the result will be a settling of a great many of our people in your States. When they come it will not be on the general haphazard immigration plan, but they will be accurately advised in advance of where to go and what they can engage in with profit."

Bearing out Mr. Shimizu's statement is a colony of 15 Japanese agricultural students that have recently taken land and located at Boca Ratone, 15 miles south of this place. The Boca Ratone colony is largely under the chaperonage of Capt. T. M. Rickards, one of the leading citizens and planters of this section, and I asked him today for a statement of the operations and intentions of the colony. After consulting with Mr. Sakai and Mr. Tsujii, the leaders of the colony, he said:

"The 15 members of the colony are agricultural students desirous of studying in a practical way our methods of farming and the capabilities of our soil, their specialties being gardening and fruit-growing. They are all young, educated men, and decline to work out for low wages, preferring to use all their time in study of American ways of doing things, and I find them immensely apt students."

"A colony having already been established in Texas, Mr. Sakai came to Florida to investigate in December, 1903, and after visiting other parts of the State, came here with a letter of introduction from Mr. J. E. Ingraham, third vice-president, in charge of the land department of the Florida East Coast Railway. After a pretty thorough examination of the large areas of prairie lands along the Hillsboro river, just west of here, he decided that it was about what he was looking for and arranged at once with the Florida East Coast Railway Co., through Mr. Ingraham, for as much land as he would want."

"They propose to plant extensively the crops which have proven a success with us, meanwhile experimenting with plants and seeds brought from Japan, but with the exception of rice and later on, perhaps, tea, my command of their language is too limited to allow me to name the others, though I see some of it growing."

"Ten of them came from the adjoining provinces of Tajino, Tango and Tamba, and two from Harima, all on the north side of Japan near Kyoto, and the others from Zumo, 150 miles farther west, all on Nippon. Their experience is based on agricultural college study with field practice and they belong to the educated classes in Japan. Since they have been here, about one month, they have cleared up some 15 or 20 acres of muck and prairie land, made seed beds and all the many preparations for a vegetable farm of from 30 to 40 acres. They have also prepared good living rooms, including especially bath arrangements, kitchen and storehouse for supplies, stables, etc. They are well pleased and have no doubt of the success of the farming ventures that they came here to try."

"They have contracted for a considerable body of land, but I am not at liberty at this time to give particulars of their negotiations in this direction."

"I am advised by Mr. Sakai that the extent of Japanese immigration will depend on the report made by this contingent from year to year, and if reasonably successful will amount to hundreds, perhaps thousands, in the course of time, but there will be no rush, as only a limited number of students will come each year, accompanied or followed by those less skilled and experienced."

"The colony here will build houses after the present crop is over, one for each family, and will then bring their wives and children. These houses will not be temporary shacks, but neat and substantial homes, provided with lights, water and all modern farmhouse conveniences."

The interview with Mr. Shimizu and Captain Rickards tell their own story and comment is unnecessary. The immigration question from the standpoint of the agricultural South is one of such importance and has recently been so much discussed that the significance of the interest being taken in this section by so desirable a people as the trained and educated classes of Japanese farmers will readily suggest the advantage of encouraging their coming.

## INDUSTRIAL EDUCATION IN GERMANY.

A series of reports by E. C. Meyer bearing the above title has just been published by the Department of Commerce and Labor. They were edited by a gentleman formerly connected with the United States consular service and later with the University of Wisconsin, under the direction of Hon. O. P. Austin, chief of the Bureau of Statistics. They have gone or are to go into all the leading libraries, boards of trade, chambers of commerce, colleges and universities at home and to many abroad. They began with a bird's-eye view of German education, laying particular stress upon the part played therein by industrial, industrial art, commercial and technical education. They paint an almost perfect picture of the entire educational system of the empire from the lowest continuation and trade schools, the basis of all, to the technical high schools, its crown. Mr. Meyer deals with general types rather than with specific forms. In this he shows excellent judgment. Thus he is able to help those wishing to adopt much that is best in the German by suggesting ideas of its adaptability. The primary and to a large extent the secondary schools are classified according to the financial possibilities of the people. Perhaps it is best that it is so. The reports point out the fact that the teachers in the lowest and humblest schools get exactly the same training as do those who teach in the highest. The tenth year of a child's life in Germany is taken as its turning point. If poor, the boy or girl goes to a primary school, in which he or she is carefully fitted for the station of life into which he or she is likely to be called. If the boy is to go upward into the higher ranks of life he leaves the common or Volks-school for a gymnasium, corresponding to our classical school, or to a real gymnasium equal to our scientific school.

The courses in the higher lines of education extend over six or nine years. Here wealth or worldly possession comes in again to decide or to help to decide the child's destiny. If in moderate circumstances the boy or girl will be likely to go in for six years, if rich for nine.

Among the best schools described are the continuation (Fortbildungsschule) schools. These are held in the afternoons or evenings and must be attended by boys and girls between 14 and 18, or by students who have finished with common day-school courses. Employers rather than parents are held responsible for the attendance of the boys and girls in their employ at the classes of these schools. The object of these schools is to help in preparing the scholars for their life-work. It would take too much time and space here to do more than suggest the above. In the reports they are dealt with in detail.

Thus then the primary plus the continuation school constitutes all that the empire offers to a large part of the vast mass of its millions. But what a splen-

did system it is only those who read every line of Mr. Meyer's reports will be able to understand.

The rich man's child, or even the boy or girl belonging to families in moderate circumstances, goes to a classical or scientific school in the beginning of its 11th year. The former are for those destined to be doctors, lawyers, clergymen, etc.; the latter are for chemists, engineers of all kinds, business managers, architects, etc. It is interesting to note in this connection that the Kaiser has caused Charlottenburg, the crowning glory of the empire's technical schools, to be lifted up to heights once occupied only by the great universities of Heidelberg, Bonn, Berlin, etc., the great seats of classical learning. He bestowed upon Charlottenburg the right to grant degrees. The classical schools of the empire are too well known to need more than a word. Their fame has gone out into all parts of the world. The student of the East, the West, the North and the South, in all lands, looks to Berlin, Bonn, Heidelberg, Leipzig, etc., as to a mecca of learning. The scientific schools are the ones to which Mr. Meyer devotes the most of his attention. He tells us that these schools have won their way under the smiles of Bismarck and the Emperor, both of whom had begun many years ago to see their value, against the bitterest kind of opposition on the part of the universities. Today they offer excellent opportunities for a broad, practical, technical education. The business man's boy, son and assistant, is a graduate therefrom. These schools, Mr. Meyer is careful to say, are not intended to be industrial schools in the strict sense, although there are such in all the large cities in the empire. Their prerogative is to prepare boys for the beginning of a business or industrial career. In them they get the fundamental factors. If they are to specialize they go to a factory or a technical school devoted to the particular trade. It is possible that much of this was known, but as pointed out by Mr. Meyer it brings the whole system of secondary education so pertinently before his readers as to require little labor in grasping the minutest details.

Mr. Meyer deals more or less with the much-mooted problem of the education of women. He says that commercial schools for women were opened in Germany as far back as 1860. Stuttgart, Munich, Leipzig and Berlin were the cities that began. Today there are schools for women everywhere. These teach sewing, tailoring, cutting, designing, etc.; in fact, all the useful branches that come up in the life of women, whether in the home or factory. The success of the Lette unions led to others. The influence of all this on the empire's economic conditions, on its industrial, social and moral life is enormous. Mr. Meyer only suggests this. The details he leaves to others in later work along this line. The picture he paints of the empire's secondary education is that of a system as nearly perfect

as any under any political system on earth. The language, always earnest, is never exaggerated or extravagant.

To this division of his subject Mr. Meyer devotes enough space to give one a good idea of just what the boy gets who is to enter the ranks of law, medicine or theology after graduation from the classical schools or who is to enter the many fields of engineering, industrial enterprise, commerce or even higher agriculture after six or nine years in the scientific schools. It is only after the perusal of these pages, weighted as they are with wisdom and suggestion, that one ceases to wonder at the empire's progress since 1860 or 1870. It all reads like romance. Recent reports from Consul-General Mason, our consul-general at Berlin, go to confirm and to emphasize every word in Mr. Meyer's book.

### HAS AN UPWARD TENDENCY.

Conditions in the Iron Market in the Birmingham District.

[Special Cor. Manufacturers' Record.]  
Birmingham, Ala., March 6.

The iron market was quoted in last letter as having a stronger tone and an upward tendency. Results the past week have confirmed the diagnosis. There were a few sales on the basis of No. 2 foundry at \$13.50, and on up to basis of \$14. In some cases the concession of minimum price was recouped by the smaller price difference between grades. There was a noticeably increased inquiry from the buyers of moderate lots, and transactions resulting showed an improvement in the volume of completed business. Some large buyers were in the market, but failed to satisfy their full requirements. But they did not go away empty-handed. Where price was agreed upon they secured a pro rata share of sellers' offerings. But orders underwent a shearing before being accepted. In one instance there was a persistent insistence for a round lot on the basis of \$13.50 for No. 2 foundry. When the negotiations were finally concluded 1000 tons of No. 2 foundry had changed hands on the basis of \$13.95 and 1000 tons of No. 1 foundry at \$14.45. The seller of this lot sold the preceding week on basis of \$13.50.

Buyers who failed to recognize the strength of the market are now coming in and finding it a very difficult matter to wring any concession from sellers in the way of a favored price. The largest individual order reported was for 4000 tons, which was accepted at varying prices from \$13.50 to \$14 for No. 2 foundry. Some of it, in delivery, was for the third quarter. Transactions for this delivery are on a gradual increase, but except where buyers they are discouraged. But when orders are tendered involving both the first half and the third quarter the spirit of accommodation enters a plea in favor of their acceptance in entirety, and the plea sometimes falls on heeding ears. These transactions are not always reported. There was a good mail-order trade for moderate and small amounts that were generally filled on the basis of \$14 for No. 2 foundry. And on that basis the market is now nearer a uniform price than has been the case for some time back. There were sales of small amount of white iron at both \$12.25 and 12.75. There were sales of No. 3 foundry at \$13.25, and some of gray forge at \$13. No. 4 foundry is about the same price. The most of the business concluded was for lots from 1000 tons down to car lots. To illustrate the character of the business (in volume) it can be stated that the Sloss-Sheffield sales for the month of February just closed amounted to 60,000 tons. To keep their trade going they have been compelled to draw on their reserve supply which they had

stored for an emergency demand. Unless they put their foot down firmly and refuse new business, what little they now have in reserve will melt away like dew in the morning sun, and stock available in furnace yards unsold will be at the zero point. There is some springing up in the demand for warrant iron, and there have been a few transactions. The largest one reported was for 1000 tons, and the price was \$13.50, basis of No. 2 foundry.

The coal and coke situation remains practically unchanged. The former could readily be placed at \$4, and for lots in hand, sure prompt delivery, it is hazardous but little to say that that price could be sprung. The great scarcity, more than the price, is the great worry. Coal has had some let-up, but affairs in that line are far from having reached their normal condition. The minimum price for run of the mines for acceptable seams of coal is \$1.50, and in certain cases there is an advance over these figures.

The Chattanooga Furnace Co., lately sold, was purchased by C. E. Bueck, president of the Trussville Company, and his associates, and will be put in first-class condition soon as possible, and will be operated by the new owners. The new company will be capitalized at \$225,000, and it will be July before it can go into commission as an iron producer. For raw material the new company will obtain supplies from properties controlled by Bueck and his associates. The capacity of the furnace will, when completed, be 150 tons daily. It will be thoroughly overhauled. There has been no improvement in furnace conditions. We are jogging along trying to improve them under circumstances at the moment not very encouraging.

The report concerning the earnings of the State convicts hired out to various interests shows gratifying results. The earnings paid into the State treasury from March, 1901, to March, 1905, were \$812,151, and from November, 1904, to March, 1905, about \$200,000. These represent net results.

The Jefferson Construction Co. has been incorporated and capitalized at \$125,000. The incorporators represent those interested in the other skyscrapers here, and the capital will be increased as circumstances demand. The hotel is to be completed by the advent of another spring.

At a meeting of the stockholders of the Dinwiddie Pipe Works an increase of the capital to \$500,000 was confirmed, and this, in turn, will be further increased as necessity warrants. They report a picking up in business since the advent of better weather, and quote pipe at \$25 for four and six-inch and at \$24 for the larger sizes. Improvements contemplated are already under way, and they will be pushed to conclusion without delay.

The United States Pipe Works at its Bessemer plant is inviting bids for improvements it is inaugurating, and which will involve the expenditure of about \$250,000.

The Birmingham Stove & Foundry Co. was incorporated and capitalized at \$25,000. J. B. Gibson is president; H. D. Mauss, vice-president, and J. M. Jolley, treasurer. It will swallow up the old Mauss plant and absorb its business.

The Brownlie Realty Co. was incorporated and capitalized at \$25,000, with H. M. Brownlie, president, and Helen E. Bennett, secretary.

A new bank is in process of organization with a capital of \$100,000. It will be on the order of a savings bank, and will be ready for business by the first of May. It will be controlled by the younger element of the business community.

In keeping with the march of progress, the L. & N. R. R. has inaugurated a private system of telephone exchange, con-

necting its freight, private offices, telegraph agencies and union depot. It will commence with about 30 miles of wire, and add to it as convenience and necessity prompt. Some time ago these letters mentioned that the boring for oil in South Alabama gave evidence of being crowned with success, and it can be now stated that the well has been bored to the depth of 1600 feet. An interruption has followed accident to machinery, but your correspondent has been shown letters from the experts in charge of the boring of the most encouraging character. The wells will be bored to a depth of 2000 feet unless they develop a gusher at a less depth.

J. M. K.

### Kentucky-Tennessee Oil Field.

[Special Cor. Manufacturers' Record.]  
Barbourville, Ky., March 6.

The pleasant weather of the past few weeks has had a good effect on oil operations in the fields of Kentucky and Tennessee, and results show up better. Many rigs that have been idle on account of the bad weather are once more in operation, and the production of the field is increasing at a gratifying rate.

During the past few weeks some new capital has entered the field, although the low price of oil is keeping numerous operators from beginning work. A company composed of New York capitalists has been organized to operate in Adair county, a wildcat territory, and a company composed of Kentucky and Tennessee capitalists will prospect in territory around Nashville, Tenn. New York people are beginning initial work in Morgan county, Kentucky, and will thoroughly prospect in the deep-sand region of upper Kentucky. In the older fields work is being confined to boundaries fixed by previous drilling.

During the month of February there were 35 strikes in the established fields, while the production amounted to 80,000 barrels. The lower fields of Kentucky attracted the greatest interest, and registered three-fourths of the total production. The Tennessee developments came in for little attention, and there was but one completion in that State during the month. The Standard Oil Co. made a strike in that State last week.

A pipe line has been extended to the Poplar Cove region of Fentress county, Tennessee, and in that territory considerable work will be carried on during the spring and summer. That is now the most promising of any Tennessee development, and the pipe-line record is expected to show a good production.

The condition of the oil market is now being watched with much interest. In view of the Kansas situation prices in the other fields are expected to advance, but no raise has yet come to the Kentucky and Tennessee grades. The lighter product now commands 80 cents per barrel, while 53 cents is paid for the heavier article. Last winter oil sold at \$1.35 per barrel.

W. S. Henson.

### Southwestern Oil Fields.

The *Oil Investors' Journal* of Beaumont, Texas, credits the different fields with the following production per day at the end of February: Batson, 10,000; Sour Lake, 7800; Humble, 87,755; Saratoga, 11,100; Spindletop, 4700; Jennings, La., 42,853.

### Testing for Oil in Tennessee.

Editor *Manufacturers' Record*:

The Tennessee Petroleum Co. (Inc.) has leased 10,000 acres of land in this vicinity, and expects to sink several test wells on these leases this season. The Greasy Cove Gas & Oil Co. is drilling a test well on one of its leases in this county.

It is down about 500 feet, and there is considerable oil seeping into the well. The indications are strong for a good producer. The Greasy Cove Gas & Oil Co. now owns about 5000 acres of leased lands, and has closed a contract with a prominent lease-taker for 10,000 acres more. A prominent Chattanooga manufacturer has secured a fine block of oil leases, and intends to drill in a test well soon. All lines of business are active, and much building will be done in Winchester this season—much more than ever before in its history. Many Northern people are locating in this county. T. D. Johns.

Winchester, Tenn.

### Rebuilding of Yazoo City.

[Special Cor. Manufacturers' Record.]  
Yazoo City, Miss., March 4.

The famous fertile Yazoo-Mississippi Delta is attracting capitalists and farmers from all over the country. The agricultural and climatic conditions in this favored section are such as to appeal to the farmer who in other sections is compelled to cultivate three or four times the area to obtain the same results. Not only are plantations in demand, but the shrewd investor is beginning to appreciate the possibilities of the many enterprising and growing towns which are located in the Delta. Manufactories of all description are being established, and those which are in operation are invariably remunerative investments.

As an instance of the stability and enterprise of these Delta towns may be cited the case of Yazoo City, Miss. On the 25th of May, 1904, this city was visited by a fire which practically wiped it from the map. Over 100 business buildings and nearly double as many residences were destroyed. Before the ashes were cold the rebuilding of the city was commenced and was prosecuted with such vigor that before fall the city was in position to handle the enormous business incidental to the marketing of such a cotton crop as Yazoo City receives.

Instead of beings prostrated by this terrible calamity the city accepted it most philosophically, and the idea rather generally prevails that the fiery visitation will prove a blessing, although it was thoroughly disguised when sent. Nearly all of the burned structures have been replaced with beautiful modern buildings, the streets have been made wider, and the city presents a thoroughly up-to-date appearance. The assessed valuation of Yazoo City has increased nearly \$1,000,000 since the fire, and the population is also increasing rapidly. This undelayed rebuilding of a practically destroyed city attests the confidence which the citizens and business men feel in the future of the Delta, and all other indications from that section are of a nature to strengthen the feeling.

### Iron Furnace for Chattanooga.

Arrangements have been completed for the construction of an iron furnace at Chattanooga, Tenn. The plant will be owned and operated by the Chattanooga Blast Furnace Co., which has just been incorporated with a capital stock of \$225,000. This company has purchased and will completely rebuild the old Chattanooga furnace at the foot of Cameron Hill, in the suburbs of the city. It will contract for many improvements, including skip-hoist, new blowers, new blowing engine and a complete modern system of bins for storing raw material. John Dowling of Battelle, Ala., has been appointed in charge of construction, and will be superintendent of the furnace. Daily capacity will be 120 tons of pig. Messrs. C. E. Bueck, G. N. Henson, S. M. Chambliss, John Dowling and H. Bond are the incorporators of the new company.

### Car Plant for South.

During the past several weeks a number of reports have been current relative to the American Car & Foundry Co. as seeking site for the establishment of a car-manufacturing plant in the South. The MANUFACTURERS' RECORD has received authoritative advices regarding this project. The facts are that the company has always been favorably inclined to the construction of a car plant in the South, and after all the localities that would be considered have been examined and their advantages investigated such action will be taken as is deemed for the best interests of the company. The proposal has not assumed definite shape as yet, and when a final decision has been reached proper announcements will appear. The company's executive offices are in the Lincoln Trust Building, St. Louis.

### To Represent Manufacturers.

An experienced salesman advises the MANUFACTURERS' RECORD that he is desirous of representing some prominent manufacturing enterprise—railway material preferably—in the South, with headquarters at Atlanta, Ga. He has had considerable experience with manufacturers now well known throughout this country, and can refer to them regarding his abilities, as well as to a prominent New York engineering firm and the general managers of two of the largest street railway and lighting companies in the South and Southwest. Manufacturers who wish to correspond regarding representation by the salesman referred to are invited to address "Salesman," care of the MANUFACTURERS' RECORD, and their letters will be forwarded.

### Organization Wants Secretary.

The Commercial and Manufacturers' Association of Paducah, Ky., writes the MANUFACTURERS' RECORD that it wants to engage a secretary for the organization. Only an energetic, progressive and enterprising man will be given consideration. Address A. J. Decker, president.

### The Cotton-Outlook Supplement.

[Wilmington (N. C.) Star.]

Subsequent to the action of the convention of cotton-growers, merchants and bankers of the South held at New Orleans, at which it was recommended that cotton acreage and fertilizers be reduced this year, the MANUFACTURERS' RECORD undertook to ascertain how effective these recommendations would be throughout the cotton belt. As a matter of course it was conceded that if the plans of the New Orleans convention were adhered to generally the result would be bound to at least prevent disaster to the cotton industry of the South, if it really did not accomplish the aim of cotton-growers to get at least 10 cents for their cotton. In order to ascertain whether the sentiment in the cotton belt sustained the action of the New Orleans convention, the MANUFACTURERS' RECORD sent out to Southern bankers a circular-letter. \* \* \* In a "Southern Cotton Prospect Supplement" our enterprising Baltimore contemporary has been publishing hundreds of replies from all over the cotton States. The responses indicate a singleness of purpose everywhere to follow the plan agreed upon at New Orleans. \* \* \* The efforts of the MANUFACTURERS' RECORD along this line indicate the progressiveness of that able journal. The scope of its "Prospect Supplement" was masterful, and its scheme has been thoroughly and satisfactorily carried out under able management. We have been furnished a comprehensive insight into the effectiveness of the cotton movement, and it is rather singular that some

of the great Southern dailies have allowed the South's great industrial paper to scoop them on a stroke of enterprise.

[Atlanta Constitution.]

That authoritative review of Southern material conditions, the MANUFACTURERS' RECORD of Baltimore, recently sent out more than 2000 circular-letters to the bankers in the Southern States, asking for their views on the whole cotton situation in their respective localities. The questions propounded for answer covered the material points as to prospective acreage reduction the coming spring, the extent of the holding movement locally and the ability of the holders to hold until the new crop is made, the reduced purchase of guano, and the intention to practice diversification this season, etc.

More than 1000 replies had been received up to the time the MANUFACTURERS' RECORD went to press, the majority of which are given to the readers of that publication in the form of a "Southern Cotton Prospect Supplement" of imposing bulk. In an editorial synopsis of this important correspondence, with which it is prefaced, the MANUFACTURERS' RECORD finds that, generally speaking, the holding movement presents few points of weakness, since the great bulk of the unsold bales is in the hands of the larger planters and merchants, who are financially able to carry it indefinitely; that "estimates of reduction of acreage range, according to different localities, from 10 per cent. to 50 per cent., in a few instances farmers quitting cotton altogether;" that "reduction in acreage promises to be accompanied in great measure by reduction in fertilizers," and that "all along the line preparations are under way for a 'hog-and-hominy' career and for 'living at home and boarding at the same place,' to say nothing of permanent occupation in the growing of other crops than cotton."

This is most encouraging, and will tend to strengthen the hands of the cotton-growers in their heroic struggle for economic liberation. \* \* \* So much for existing conditions and future prospects as impartially and reliably reviewed by the greatest journalistic industrial authority in the South, after a systematic canvass of the most conservative opinion possible to be obtained—the opinion of local Southern banks based on actual financial dealings and intimate personal observations made necessary by such business relations with the Southern farmers.

Surely, redundant as was the cotton crop of 1904, no dispassionate student of the present situation will be able to see wherein it has wrought harm to Southern prosperity, but, on the contrary, he must conclude that in the end it will be made to contribute most decidedly to Southern prosperity. There have been and will yet be temporary inconveniences and sacrifices, of course, but the fact remains that fully \$500,000,000 has been paid for the two-thirds of the cotton crop already sold, and the remaining one-third will sooner or later bring \$225,000,000 more if sold at the minimum price of 10 cents, for which it is being held. With an unusually short crop to be grown this year—a crop of probably not to exceed 9,000,000 bales—much of this residue ought to bring above 10 cents, and the Constitution feels safe in hazarding the prediction that when the last bale of the 1904 crop is sold it will be found to have yielded the producers in round numbers \$750,000,000—nearly \$150,000,000 more than was received for the abnormally high-priced crop of 1903, and more than \$250,000,000 more than was ever before the Sully year received for a single crop of American cotton!

In the last week in February 3,760,000 cigars were shipped from Tampa, Fla., the total since January 1 being 22,085,000.

## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

### Athens' Linen Mill.

Last week the MANUFACTURERS' RECORD announced that W. T. Bryan and his associates of the Southern Manufacturing Co. at Athens, Ga., had decided to establish a linen mill. Contract for the erection of the necessary building has been awarded to T. J. Nichols and is to be completed by April 15. Contract has also been awarded for the installation of the carding, spinning and weaving machinery needed. The mill's capacity will be 10,000 pounds of goods per week. Mr. Bryan and his associates will soon apply for charter of incorporation for this enterprise, capital stock to be \$250,000.

### Beatrice Cotton Mills.

The stockholders of the Beatrice Cotton Mills, reported last week as incorporated at Meridian, Miss., have organized and elected officers. M. Winner is president; C. P. Weatherbee, first vice-president; James K. Chote, second vice-president; Louis Cohen, third vice-president; T. E. Rivers, secretary; H. G. Meyer, treasurer, and Louis Cohen, general manager. They and a number of others are the directors for the first year. Contract for the erection of buildings is expected to be awarded in the near future; these and the textile machinery will cost \$400,000. Details as to equipment not stated as yet.

### Woodstock Mill to Enlarge.

The Woodstock Cotton Mills of Anniston, Ala., will enlarge its plant and increase to 10,000 spindles, contracts having been awarded. Contract for erecting the additional mill building—a one-story brick structure 50x100 feet—has been awarded to Thomas Wolsoncroft, and the contractor is required to complete same within 60 days. These additions will provide the space for several thousand spindles and looms, which machinery has been ordered and will be installed. The company increased its capital stock from \$100,000 to \$250,000 some months ago for the purpose of making improvements.

### The Bonham Mill Enlargement.

The Bonham Cotton Mills of Bonham, Texas, has begun the erection of an additional building 60x100 feet in size, which will permit the company to install the 5000 spindles and 150 looms noted in January as to be installed. About \$75,000 is to be expended for the improvements indicated. Contract for the new machinery was awarded recently to the Lowell Machine Shop of Lowell, Mass.

### To Double Moultrie Mill.

It is stated that the Moultrie Cotton Mills of Moultrie, Ga., will double its plant, now operating 5000 spindles and 280 looms, and running day and night. The company has, it is reported, practically made all the necessary contracts, and the erection of an additional building will be begun at once. About a year ago the company increased its capital stock from \$100,000 to \$175,000.

### Textile Notes.

Messrs. A. W. Huntley, M. J. Boling, J. E. Gunter and others of Merry Oaks, N. C., have incorporated the Merry Oaks Hosiery Co. for knitting hosiery.

It is reported that Edmund M. McLean of Savannah, Ga., will establish in Columbus, Ga., a plant for the manufacture of fine madras shirting and other products of that character.

Messrs. W. J. Nally, H. W. Nally and J. N. Weeres of Villa Rica, Ga., have in-

corporated the Golden City Cotton Mill Co. with capital stock of \$60,000 for the purpose of manufacturing cotton goods.

The Georgia Manufacturing Co., Whitehall Ga., has awarded contract for the installation of machinery to double its plant of 12,000 ring spindles and 5568 twisting spindles. An additional building is now in course of erection.

The Lafayette (Ga.) Cotton Mills has awarded contract to the Lowell (Mass.) Machine Shop for additional carding, spinning and weaving machinery to fill the mill building. The company has been operating 5000 spindles and 160 looms.

### QUOTATIONS OF COTTON YARNS.

By Paulson, Linkroom & Co., New York, Philadelphia and Chicago. March 7.

No. 10s-1 and 12s-1 warps.....	14½ @—
No. 14s-1 warps.....	15 @—
No. 16s-1 warps.....	15½ @—
No. 20s-1 warps.....	16 @—
No. 22s-1 warps.....	16½ @—
No. 26s-1 warps.....	17 @—
No. 6s to 10s yarn.....	14 @ 14½
No. 12s-1.....	14½ @—
No. 14s-1.....	15 @—
No. 16s-1.....	15½ @—
No. 20s-1.....	16 @—
No. 22s-1.....	16½ @—
No. 26s-1.....	17 @—
No. 8s-2 ply soft yarn.....	15 @—
No. 10s-2 ply soft yarn.....	15½ @ 16½
No. 8s-2 ply hard.....	14½ @—
No. 10s-2 ply hard.....	15 @ 15½
No. 12s-2 ply.....	15 @—
No. 14s-2 ply.....	15½ @—
No. 16s-2 ply.....	16 @—
No. 20s-2 ply.....	16½ @—
No. 22s-2 ply.....	17 @—
No. 26s-2 ply.....	17½ @—
No. 30s-2 ply.....	18 @—
No. 36s-2 ply yarn.....	19 @—
No. 40s-2 ply.....	23 @—
No. 8s-3, 4 and 5 ply.....	14½ @—
No. 20s-2 ply chain warps.....	16½ @ 17
No. 24s-2 ply chain warps.....	18 @—
No. 26s-2 ply chain warps.....	18½ @—
No. 30s-2 ply chain warps.....	19½ @ 20
No. 16s-3 ply.....	16 @—
No. 20s-3 ply.....	16½ @—
No. 26s-3 ply.....	18 @—

### Wants Hydraulic Rams.

Eugenio Senbla, Aguascalientes, Mexico, writes to the MANUFACTURERS' RECORD as follows:

"I should like to know to what manufacturers in your country I must address myself in order to obtain hydraulic rams for raising large quantities of water to supply cities. The motor must be automatic and large enough to insure an actual result of 70 liters of water per second through a height of 30 meters, the head being nine meters. I should like to know what dimensions must be given to the inlet and what to the outlet in relation to the body of the ram and the capacity of the air chamber. I should like also to know the names of manufacturers of cast-iron tubing from .5 to 1 meter in diameter, the weight per linear meter of each kind of pipe and the price per ton of 1015 kilograms."

### For American Novelties.

The New Lines Introduction Co., No. 44 Adelaide Road, West Ealing, London, W., England, writes to the MANUFACTURERS' RECORD that it desires to represent as sole agent in the United Kingdom American manufacturers of household novelties, and is especially desirous to get into communication with a manufacturer of cheap hand wagons for coal merchants, green grocers, etc., to be exported at from \$4 to \$10 f. o. b. New York, according to size and make. The company is also inquiring about an American pottery manufacturer who would make on the spot to save shipping charges a foot-warmer which it handles.

O. Danner, No. 52 Faubourg Poissonnier, Paris, writes to the MANUFACTURERS' RECORD that while he has heretofore been interested in hardware and household goods, he is now undertaking to handle dishwashing machines, meat-cutting machines and the like, for which he has extended relations in France and other continental countries.

During February 6695 tons of Peace river phosphate rock were shipped through Punta Gorda, Fla.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

## TIDEWATER ASKS BIDS.

## Preparations to Begin Construction of New Coal Road Across Virginia.

The Tidewater Railway Co. is preparing to build its line to Norfolk, Va. It is now advertising for bids in April, as will be seen by a notice in another column of the MANUFACTURERS' RECORD, for the grading and masonry of 100 miles of line westward from Sewall's Point, near Norfolk. This work will be under the charge of C. P. Howard, chief engineer at Beckley, W. Va., and B. T. Elmore, assistant chief engineer at Roanoke, Va., who can furnish information about the conditions surrounding the proposed construction, which is to be let in 20 sections, each five miles long.

The city council of Norfolk has passed and the mayor has signed the ordinance appropriating \$95,000 to purchase right of way 100 feet wide and 13 miles long, which the city of Norfolk will present to the railway company in consequence of the decision to make its export terminal at that point. It is said that the right of way may not, after all, cost as much as expected, and if that prove to be the case, the unexpended balance will be returned to the city treasury.

The plan of the Tidewater Railway Co. is to continue its line westward via Roanoke, Va., to a connection with the Deepwater Railway of West Virginia, which is now approaching completion. Together, these lines will form a coal-carrying railroad from the Kanawha river to the Chesapeake bay.

## HOUSTON TO GALVESTON.

## Two Companies Now in the Field to Build Electric Railways.

The Houston-Galveston Electric Railway Co. has filed its charter at Austin, Texas, to build a line from Houston to Galveston, 54 miles. The incorporators are Frank P. Read, William Johnston, Rolla M. Johnston, George L. Horton and A. D. Trotter, all of Houston, which is to be the headquarters of the company, that will have a capital of \$1,350,000.

According to a report from Houston, the incorporators are also directors of the road, and they are all connected with the firm of Johnston & Read, who are building the extension of the St. Louis, Brownsville & Mexico Railway from Robstown to Bay City. The survey for the proposed interurban road will, it is said, be immediately begun by David M. Duller, civil engineer.

Rolla M. Johnston, one of the directors, is reported as saying that capital has been provided to build the line, and no time will be lost in constructing it. A direct route will be adopted. Application for franchises in the two cities will be made as soon as the right of way is determined upon.

The incorporation of this company makes two propositions for building an electric railway from Houston to Galveston. The Houston-Galveston Interurban Railway Co. was incorporated last May to build a line, the directors being James R. Patton of Kansas City, Mo.; Charles D. Graham of Fairview, Kan.; T. W. Allen of Greenup, Ill.; Walter Gresham of Galveston, Texas; W. E. Scott, W. B. Slosson, A. C. Albott and J. E. Lafferty, all of Houston, Texas. The officers are W. B. Scott, president; O. M. Whitcomb, first vice-president; J. E. Lafferty, second vice-president, and W. D. Slosson, secretary.

This company will, it is reported, soon begin active construction of its line, engineers being now in the field.

## COAL RIVER &amp; WESTERN.

## Chesapeake &amp; Ohio Reported to Have Bought It With Fuel Territory.

The Coal River & Western Railway, according to dispatches from Charleston, W. Va., has been purchased by the Chesapeake & Ohio Railway Co. This road extends from St. Albans, W. Va., to Holley, W. Va., on Fork creek, 18 miles. Senator W. C. Sproul of Chester, Pa., is president; T. S. Clark is treasurer at Charleston, and C. K. McDermott is general superintendent at St. Albans. The road was built by Gen. C. C. Watts of Charleston, Col. A. J. Lynch of Canton, Ohio, and others, but control of the line was bought last year by Senator Sproul and associates. The road reaches fine coal fields, and it is reported that the Chesapeake & Ohio will build branches to connect it with its lines at Logan Court House and on Cabin creek. The deal is said to include thousands of acres of coal land, besides timber tracts.

The deal between Senator Sproul and the Chesapeake & Ohio is said to have been concluded through Chilton, MacCorkle & Chilton, attorneys, of Charleston, and in this connection it is interesting to note that in January the Coal River Railway was chartered by A. D. MacCorkle, Henry G. O. Chilton, M. M. Williamson and Samuel Stephenson to build a line from Point Pleasant, W. Va., to St. Albans and Coal River, and thence to Bramwell, W. Va. Such a line would evidently take in the Coal River & Western Railroad, and would cross the State from Point Pleasant, on the Ohio river, to Bramwell, on the Norfolk & Western Railway in Mercer county, not far from the Virginia line. Whether this franchise is also acquired by the Chesapeake & Ohio does not appear in the reports from Charleston.

## ROWLESBURG TO DURBIN.

## Plan of the West Virginia, Pittsburg &amp; Atlantic Railroad, Just Chartered.

Concerning the West Virginia, Pittsburg & Atlantic Railroad, recently chartered for a line from Rowlesburg, W. Va., to Durbin, W. Va., a report from Morgantown, in that State, says that the new company will include the Dry Fork Railroad, which is 32 miles long from Hendricks to Horton, W. Va. The distance from Rowlesburg to Hendricks up the valley of the Cheat river is about 30 miles, and the distance from Horton to Durbin is about the same.

Including the Dry Fork Railroad, the building of these two extensions, one from each terminal, would make a route approximately 100 miles long from Rowlesburg to Durbin, although if an air line were possible, which it is not, on account of the mountainous character of the country, a line about 60 miles long could be obtained. The incorporators of the new company include Mr. R. F. Whitmer, president of the Dry Fork Railroad, 208 Girard Building, Philadelphia, Pa.; A. J. Armstrong, vice-president, Bayard, W. Va.; C. W. Mosser, general manager, and F. E. Mower, auditor, both of Hendricks, W. Va., besides E. D. Baker of Beverly, W. Va.

The building of this road would provide a line from Rowlesburg to Parsons, W. Va., where none now exists, but the three miles from Parsons to Hendricks is covered by the West Virginia Central. It will also give a line through a new country from Horton to Durbin, the latter point being a terminal of both the West Virginia Central and the Chesapeake & Ohio railways.

## No Deal Made.

Mr. R. H. Baker, vice-president and general manager of the Trinity & Brazos Valley Railway, writes from Austin, Texas, to the MANUFACTURERS' RECORD

concerning a recent press report which quoted Mr. Jeff N. Miller, vice-president and general manager of the St. Louis, Brownsville & Mexico Railway, as saying that his company had purchased the first-named road.

Mr. Baker in his letter says that no such sale has been made, and that Mr. Miller tells him that the interview was made out of the whole cloth, and that he was not responsible for it.

In addition to this denial from Mr. Baker, a late press report from Houston, Texas, quotes Mr. Miller as making an emphatic denial that he had ever given an interview saying that his company had purchased the Trinity & Brazos Valley line.

## Gulf &amp; Ship Island Extension.

Fisk & Robinson's monthly bulletin says concerning the Gulf & Ship Island Railroad that work is being actively prosecuted on the 27 miles of line to be constructed between the termini of the Silver Creek and Columbia branches. In addition to opening up a new section of country hitherto without railroad facilities, this additional mileage will complete an alternative route for the Gulf & Ship Island between Mendenhall and Maxie, on the main line, a distance of about 100 miles, and will, it is said, permit the handling of an increased volume of freight at a lower cost per ton mile. The company's statement for January shows gross earnings \$146,501, an increase over the same month last year, and for the seven months ended January 31 gross earnings of \$1,092,652, also an increase over the corresponding period of the previous year.

## A Nine-Mile Extension.

Mr. M. W. Bahn, vice-president and general manager of the Stewartstown Railroad, writes from York, Pa., to the MANUFACTURERS' RECORD that the construction of the New Park & Fawn Grove Railroad is practically an extension of the present Stewartstown Railroad. The proposed route runs near Norrisville, Md., and New Park, Pa., to Fawn Grove, Pa., nine miles, all in Pennsylvania. The company will be incorporated at \$90,000, and the line will cost about \$7000 per mile. The road will be operated by the Stewartstown Railroad Co., whose line connects with the Northern Central at New Freedom. The route will shortly be resurveyed and rights of way obtained. In the meantime subscriptions to stock are taken, and if efforts meet with predicted success construction will begin in the early spring.

## Poor's Railroad Manual Appendix.

A special edition of Poor's Railroad Manual Appendix, dated February, 1905, has been issued by Poor's Railroad Manual Co., 68 William street, New York. This little volume is neatly bound in green cloth and contains, besides the ready-reference bond list of the previous edition, a diary of annual meetings of different railroad companies arranged both by months and by days of the week. A table of dividends and dividend periods is also presented. The book is particularly valuable not only to bankers and brokers, but to investors generally. It is neatly printed in good clear type on substantial paper.

## Beaumont &amp; Saratoga Line.

Mr. J. F. Keith, president of the Keith Lumber Co., writes from Beaumont, Texas, to the MANUFACTURERS' RECORD that the line of the Beaumont & Saratoga Transportation Co. will not be extended farther than about eight miles at present. This is built principally for a logging and lumber road, and is only extended as needed, but it is chartered and will receive other business that may be offered. The country is altogether timbered. The

company has two locomotives and 20 cars, all that will be needed at present. Mr. J. H. Broome of Voth, Texas, will act as superintendent and engineer.

## May Build Extensively in Texas.

An unconfirmed press report from Denver, Col., quotes Mr. J. M. Herbert, vice-president and general manager of the Colorado & Southern Railway as saying: "We expect to build 3000 miles of road in Texas, and we will probably buy several thousand miles of track already built. It is our intention to make the Colorado & Southern one of the great railroad systems of the West, and 20 or 30 small roads will be combined with our present lines to accomplish this."

## Atlantic &amp; Birmingham.

The Atlantic & Birmingham Railway is reported to have sent engineers to Oglethorpe, Ga., to begin the survey for its proposed extension from Montezuma to Birmingham. Alexander Bonnyman, superintendent, will, it is said, superintend the construction of the new line. The Atlantic & Birmingham Construction Co. has applied for a charter and will build the road, those interested being R. E. Cullinane, W. B. Stovall, F. M. Sisk and S. J. Bradley.

## Two Street Railway Deals Reported.

Press dispatches from Memphis, Tenn., and Montgomery, Ala., report two street railway deals as having been closed. The dispatches from Memphis say that the sale of the Memphis Street Railway Co. to Messrs. Ford, Bacon & Davis, engineers, of New York city, has been announced. Dispatches from Montgomery say that a controlling interest in the Montgomery Traction Co. has been sold to Philadelphia capitalists.

## Electric Belt Line.

The Pocahontas, Graham & Tazewell Electric Belt Line of Pocahontas, Va., is reported chartered to build an electric railway from Pocahontas to Graham, Tip-top, Tazewell and Dry Fork, and thence back to Pocahontas, altogether about 50 miles. The incorporators are J. S. Browning, president; William Leckie, vice-president; V. L. Sexton, secretary, all of Pocahontas.

## Railroad Notes.

The Alabama Great Southern Railway has, it is reported, let a contract for 20,000 tons of 80-pound steel rails to be delivered early next year.

Mr. A. S. Baldwin, engineer of construction Illinois Central Railroad, writes from Chicago to the MANUFACTURERS' RECORD that surveys have just been started for the proposed reduction of grade between Princeton and Fulton, Ky.

Mr. W. S. Preddy, chief engineer, writes from Anthony, Kan., to the MANUFACTURERS' RECORD that he is starting the construction on the Kansas, Medicine Valley & Western Railroad, which is in the market for material and tools of different kinds.

The Rock Island system, it is reported, will soon begin receiving 65 locomotives ordered some time ago for delivery this month, and it is also said to have in an order for 50 additional locomotives, besides 4000 freight cars. Twenty new passenger cars are to be put in service this month.

The Southern Railway Co. announces the following appointments: Mr. J. B. Campbell, commercial agent; Mr. J. N. Templeton, soliciting freight agent, both at 232 Fourth avenue, Louisville, Ky.; Mr. H. B. Stafford, traveling freight agent, Board of Trade Building, Little Rock, Ark.; Mr. E. H. Craig, traveling freight agent, Sheffield, Ala.

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### A \$250,000 Wood-Alcohol Plant.

There has been just completed at Hattiesburg, Miss., a plant which is of considerable interest in connection with the lumber industry. This plant has been erected and equipped—seven large buildings covering seven acres of land—at a cost of approximately \$250,000 by the Lignum Product Co. of Hattiesburg. It will manufacture wood alcohol from the sawdust of the yellow pine saw-mills of the lumber region around Hattiesburg, and there remains a by-product which can be sold for fuel. The wood-alcohol process used is a secret one, and only employees of the company are admitted to the machinery department.

### Lumber Notes.

Three lumber firms of Beaumont, Texas, are busy filling orders for lumber and timber aggregating 8,000,000 feet.

A steamship sailed from Port Arthur for Liverpool last week with a cargo of 1,070,084 feet of pine timber, 324,752 feet of pine lumber, 122,000 staves and 4070 feet of ash logs.

The Southern Land & Improvement Co., financed by lumbermen of Detroit and Rochester, is preparing to erect at Sunrise, La., a large mill for the exploitation of 25,000 acres of timber land near Baton Rouge.

St. Louis capitalists have purchased for \$550,000 the property of the Tioga Lumber Co. of Tioga, La., including a saw-mill with daily capacity of 125,000 feet of lumber, 1,000,000 feet of lumber in the yards and 20,000 acres of timber land.

The National Wholesale Lumber Dealers' Association, in session last week at Philadelphia, elected Mr. Lewis Dill of Baltimore, president, and Messrs. Lewis Dill of Baltimore, C. H. Prescott, Jr., Cleveland; George F. Craig, Philadelphia; Frank W. Lawrence, Boston; W. W. Knight, Indianapolis; A. L. Stone, Pittsburgh, and J. B. Wall, Buffalo, trustees.

The National Box and Box Shook Manufacturers at their annual convention at Baltimore last week elected the following officers: President, B. F. Master, Chicago; vice-presidents, C. Fred Yegge, Cairo, Ill.; John Ames Cook, Marionet, Wis.; Joseph W. Cottrell, Pittsburg; secretary-treasurer, E. H. Defebaugh, Louisville, Ky.; directors, B. W. Porter (president), Springfield, Mass.; E. H. Barnes, New York; Rufus D. Goodnow, Baltimore; Charles E. Turner, Warsaw, Wis.; C. T. Williams, Cleveland, Ohio; L. H. Loy, St. Louis; C. M. Howlett, Cambridge, Mass.; Louis Winchell, San Francisco; F. J. Cress, Pittsburg; August Beck, Milwaukee; S. B. Anderson, Memphis; W. F. Brown, Jersey City.

### Joplin Ore.

Shipments from the Joplin, Mo., field during the week ended March 4 were 10,672,980 pounds of zinc ore and 1,297,599 pounds of lead ore, valued in all at \$290,490. The total shipments of the nine weeks of the year aggregate 34,933 tons of zinc and 3924 tons of lead, against 38,500 tons of zinc and 5553 tons of lead for the same period of last year—a decrease of 3567 tons of zinc and 430 tons of lead, but the combined value of this year is \$2,032,190, an increase over last year of \$290,145.

The Northern Central Railway Co. reports for January as compared with the same month of last year gross earnings, increase, \$42,700; expenses, increase, \$42,900; net earnings, decrease, \$200.

## MECHANICAL

### A Natural-Gas Pumping Plant.

The United States Steel Corporation, at its Homestead, Duquesne and Bessemer plants, consumes about 65,000,000 cubic feet of natural gas every day. This is used exclusively for melting and heating steel in the open-hearth furnaces and heaters and comes directly from gas wells in Pennsylvania and West Virginia through hundreds of miles of pipe, the main lines varying in diameter from 10 to 20 inches.

As gas wells become exhausted the natural pressures are lowered and this means a diminished volume in the pipe lines and

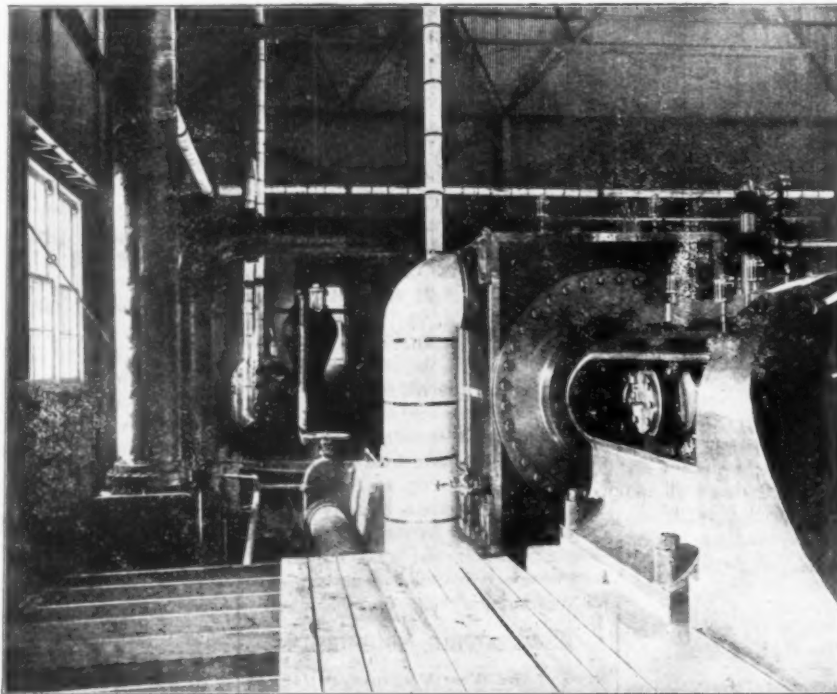
pounds per square inch, developing a total of 3000 horse-power in both machines. The steam pressure at high-pressure steam cylinder is 150 pounds; cut-off for above conditions quarter stroke.

Each engine is fitted with a jet condenser, made by the Snow Steam Pump Co. of Buffalo, N. Y., having single steam and air-pump cylinders 18 and 30x24 inches; capacity of each condenser at moderate speed is 35,000 pounds steam per hour.

The frames of the engines are of the heavy-duty type, having footing on the foundation almost the entire length; the fronts of pillow blocks are especially reinforced with heavy ribs finished as indicated.

The grates are covered with fire-brick so that natural gas can be used as a fuel. Each boiler is fitted with five gas-burners of special design, employing a five-jet of steam to facilitate the proper mixing of the gas and air. Combustion in the furnace is as perfect as can be made, judging from the incandescent appearance and absence of any carbon deposit on bricks or tubes whatever.

The feed water reaches the boilers at 210 degrees F. through a Cochran open feed-water heater, made by the Harrison Safety Boiler Co. of Philadelphia, which takes exhaust steam from all auxiliary pumps, steam cylinders of condensers and electric-light engine, and is also piped for



LOW-PRESSURE SIDE OF COMPRESSOR.

diminished returns on the investment. Additional or larger pipe lines would prolong the supply, but a much less expensive method is resorted to, and that is to again raise the pressure by means of a gas compressor.

The Carnegie Natural Gas Co. (a company of the United States Steel Corporation) has already installed compressor capacity which has an equivalent artificial yield of 100,000,000 cubic feet of natural gas per 24 hours. This capacity is represented by eight compressors in three stations, each station designed for reserve capacity over present requirements, so that the eight machines are not always in use.

The most recent of these plants containing new features and improvements is located near Hundred, W. Va.

The plant consists of two compressors, six boilers and a reservoir dammed for holding an ample supply of condensing water.

The two compressors, built by the Rand Drill Co. of New York, are of the heavy-duty cross-compound design known as "BB-4" and conform to the following general specifications: Size of high-pressure steam cylinders, 32x60 inches; size of low-pressure steam cylinders, 60x60 inches; size of gas cylinders, 21x60 inches.

The equivalent capacity in free gas per 24 hours (or at atmospheric pressure), with intake pressure of 50 pounds and running at 50 revolutions per minute is 15,000,000 cubic feet for each unit, or 30,000,000 cubic feet for both compressors.

This quantity of gas is discharged into four discharge lines at a pressure of 300

psi. Heavy sole plates with deep ribs extend under both steam and gas cylinders. The supports under the crosshead guides and tail guides for coupling nuts extend down to the floor line. This form of construction gives ample strength in every part and insures stability and rigidity under the most severe strains. The total weight of each compressor is 450,000 pounds.

The steam receiver between the high and low pressure cylinders is of the reheating type.

The gas cylinders have poppet inlet and poppet outlet valves of Rand special design, insuring free opening as shown on indicator cards at 55 revolutions per minute. The inlet valves have solid stem and split valve seats to prevent valves from being sucked into the cylinder on account of loosened nuts. Steel guard plates are also used as an additional safeguard for keeping valves out of the cylinders. The gas-cylinder heads are hooded and form a closed inlet passage connecting with the discharge elbow.

At the point where the discharge gas enters the main pipe line the pipe is tapped for an inch pipe; this pipe leads to the compressor-house and to a gas-pressure regulator which works in conjunction with the speed governor automatically on the cut-off, thereby reducing the speed below or increasing it up to the normal by means of the pipe pressure.

The boiler plant consists of six 250-horse-power boilers, built by the Cahall Sales Department of Pittsburg, which are set in batteries of two, or 500 horse-power to each battery. Each battery is provided with a self-supporting steel stack 54 inches in diameter by 60 feet high,

taking water from hot wells of condensers.

Two low-service duplex piston pumps supply a 54,136-gallon tank with circulating water for jackets of gas cylinders; the tank is placed at an elevation of 20 feet, insuring steady gravity flow, and after this water passes through the jackets it is piped to the hot wells. All piping to and from the feed-water pumps is designed for every possible contingency effecting the use of one or both units in supplying all or any one boiler at will; the supply may be taken direct from the cold-water reservoir or from condenser hot wells or through the feed-water heater.

The water is remarkably free from scale-forming impurities—catch-pans in the heater have not collected up to the present time enough to necessitate their cleaning. The oil from the exhaust steam is eliminated before the steam comes in contact with the water to be heated.

Both buildings are lighted by 100 16-candle-power incandescent lamps. The generator, built by the Westinghouse Electric & Manufacturing Co. of Pittsburg, Pa., a 7½-kilowatt Westinghouse belted-type, compound-wound, 110-volt, 1300 revolutions per minute, is driven by an independent steam engine and located in the boiler-house near the auxiliary pumps.

The switchboard is of marble with open wiring at rear of board; no fuse cut-outs are placed inside of the compressor-house, so as to avoid any possible danger of an explosion.

All steam piping is made of wrought iron and all connections over three inches

in diameter are flanged. The flanges in steam line of 10 inches and over are of rolled steel and pined to fit; valves and fittings were all tested to 200 pounds per square inch.

The main steam line and header consists of a loop of 12-inch pipe; by means of this arrangement liability to shut down on account of any accident to main steam line is avoided and there is also a lack of vibration in steam line. All bends are of long radius and ample provision is made to take care of expansion and contraction.

Steam reaches the high-pressure cylinders through vertical Sweet separators, made by the Direct Process Co. of Syracuse, N. Y., eliminating the moisture to within 1 per cent.

The exhaust piping from each low-pressure cylinder is 20 inches in diameter and fitted with gate valve and automatic relief valve for passing the exhaust steam to condenser or atmosphere. The vertical atmospheric exhaust pipe is made of No. 14 galvanized-iron riveted pipe 20 inches in diameter.

The inlet to the compressors is at the top, the outlet at the bottom, which is at the reverse of that ordinarily employed in compressors. The four gas cylinders are connected to a common inlet header made of extra heavy 20-inch pipe and fittings. The vertical legs of the header are mounted on a 20-inch cross which permits of two well connections for each and is designed for separating the sand and dirt from the gas, keeping it out of the gas-compressor cylinders and thus minimizing the wear on poppet valves and seats. This large header acts as a receiver; the gas at present is delivered to it in two 10-inch pipes, and by virtue

and expansion joints complete the connections. By having the discharge lines at the bottom instead of the top of the cylinders the expansion due to heat of compression is provided for in a more satisfactory and economical manner.

Recent records of intake-line pressures, when compressors are not in operation, show that they vary from 160 to 225 pounds, but when the compressor is operating at 55 revolutions per minute this intake drops to 65 pounds, thus delivering 18,000,000 cubic feet per 24 hours with one compressor. This quantity leaves the compressors at 300 pounds per square inch and is delivered through 10 and 20-inch pipe lines over a distance of 90 miles.

The location of the plant being practically the bed of a mountain stream which yielded from nothing to a flood, according to seasons of the year, it was necessary to provide storage capacity for condensing purposes and make provision for water for boilers and circulating pumps.

It is at the intersection of two small streams; near this point a concrete dam was constructed and the ground on one side of the buildings excavated so as to form a reservoir 4 to 5 feet deep; the inner bank of both streams forming an "L" were not cut down, thereby doubling the cooling surface, or the distance traversed by the water before it is again used in the condensers.

The hot water as it leaves the condensers at the end of compressor buildings is conveyed in a wooden sluice to the upper end of a reservoir. The surface of the water exposed in the sluice is sufficient to spread it out in thin layers and it then trickles down the sides into the reservoir. Ultimately this sluice will be extended to

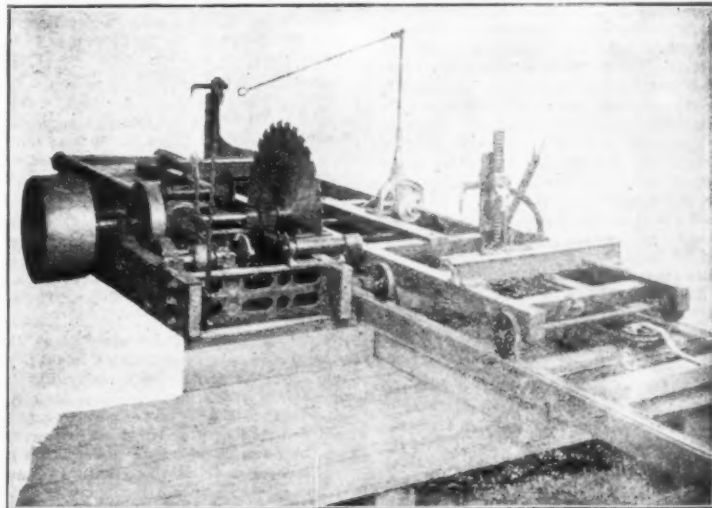
easy matter to change the steam valve gear of the compressors to run non-condensing. With double e-centrics on both high and low-pressure steam cylinders it will not be a difficult matter to keep the compressors up to their capacity, although it will mean more steam consumption. Then again, as the dry seasons occur at a time when the demand for gas is least, no real inconvenience may be expected on account of

pipe lines, this method of prolonging the life of the wells is generally used.

Accompanying illustrations show the low-pressure side of the compressor, and the inlet gas piping and exhaust steam piping—low-pressure side.

#### The Gainesville Saw-Mill.

An accompanying illustration represents the Gainesville Saw-Mill, built by the Gainesville Iron Works of Gaines-



THE GAINESVILLE SAW-MILL.

reduction of condenser water supply.

This plant has now been in continuous operation for several months, closely maintaining the conditions for which it was designed, the inlet pressure being 55 to 65 pounds per square inch with a speed of 55 revolutions per minute. The dis-

ville, Ga. As will be noted the mill is compact and strong. The timbers in the husk-frame are 31½x12 inches with iron ends and are firmly bolted.

The carriage and track timbers are 31½x6 inches, bolted same as the husk-frame.

Attention is called to the friction-feed. The pulleys are of iron-and-paper construction and are of ample size to handle the carriage with all ease; they are perfectly balanced and true, and so arranged that the sawyer can vary the feed at will from the slowest to fastest by the adjusting lever. The backing device is so arranged that the carriage may be backed at a greatly increased speed above the feed. This is a great saving over the old slow-feed mills.

The headblocks are simultaneous-setting ratchet-blocks and are fitted with patent dogs. The headblocks are joined by steel shafting with Gainesville universal coupling, by means of which the blocks may be kept perfectly square.

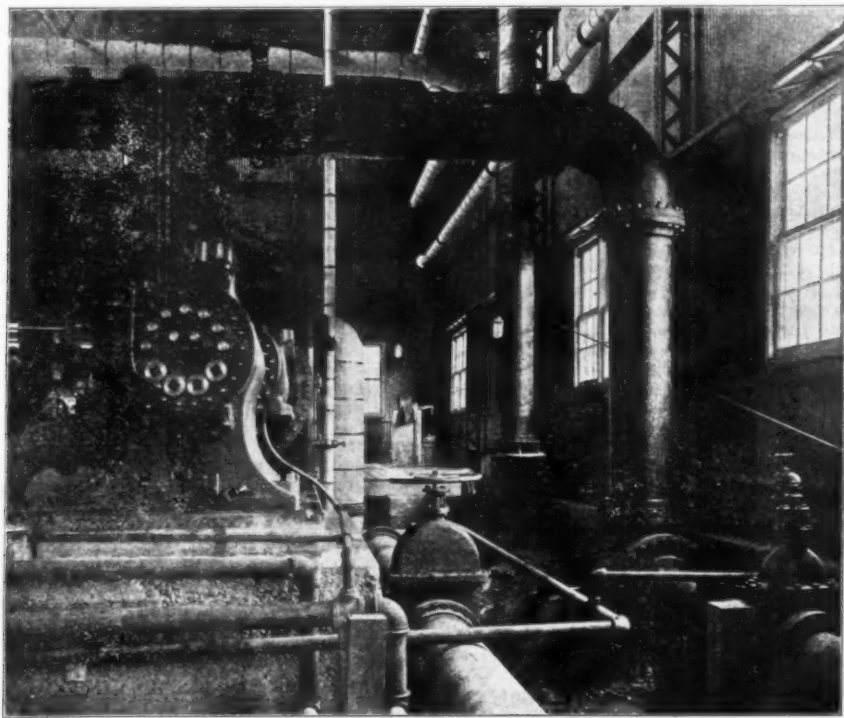
The setworks set with absolute accuracy, and through them the sawyer may set and reverse the blocks and so have entire control of the mill if desired. This point should not be overlooked, as in small mills the saving of the extra man usually required would soon pay the first cost of the mill.

This mill is made in small and large sizes. It is built for medium-size timbers and does rapid and accurate work. The framing is of the best Southern pine, painted and strongly bolted together. The headblocks open out to 33 inches.

Write the company for further details.

#### Paducah's Association Reorganized.

The Commercial and Manufacturers' Association of Paducah, Ky., has been reorganized and increased its membership tenfold, besides electing new officers, who include A. J. Decker, president; George C. Wallace, vice-president; Ben Weille, treasurer, and H. E. Thompson, secretary. This association is devoted to the progress of Paducah, and will use every effort to advance the city's commercial and manufacturing interests. Manufacturers and other business men and home builders seeking locations are invited to write for facts about Paducah and its surrounding territory.



INLET GAS PIPING AND EXHAUST STEAM PIPING—LOW-PRESSURE SIDE.

of the large difference in area between header and inlet pipe the velocity of flow is reduced proportionately, thus permitting the particles of sand carried in with the current of gas to settle at the bottom of the vertical legs of the header, where provision is made for cleaning.

The outlet pipe connections are at the bottom (on the inside) of the gas cylinders, leading immediately below the floor and out of the building with long-radius bends, then they follow the bed of a small stream where they are submerged for a distance of several hundred feet. Near this point the four lines join the main line; gate valves with rising spindle

the lower end of the reservoir and the water will be spread out in thinner layers, passing through small perforations at the bottom of the sluice or modified cooling-tower.

During the very dry seasons when the streams contain practically no water at all the amount lost by evaporation is restored by four artesian wells located within a few feet of the buildings. The water from these wells is brought to the surface by means of jets of natural gas, applied on the same principle as in the air-lift pump.

Should the condensing water supply fail altogether at any time it will be an

charge pressure averages 300 pounds and the temperature of discharge is 200 degrees F., while the inlet temperature is 56 degrees F. This rise in temperature, due to heat of compression, although very slight, is reduced to atmospheric temperature by the water in creek covering the four discharge pipes before they join the main line.

The gas burned under the boilers for the present working conditions is just 3¼ per cent. of the total amount delivered by the compressors and at the prevailing price for gas represents a very low operating expense. As the installation cost is also lower than that of extra

# Construction Department

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

### ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

## BALTIMORE BUILDING NOTES.

### Business Buildings.

Baltimore—Eastern High School.—The Mayor and City Council have awarded contract to D. W. & G. H. Thomas, builders, Vickers Building, German street, near South street, for the construction of building for the Eastern High School, to be located at corner of Broadway and North avenue, after plans and specifications by Simonson & Pietsch, architects, Hoen Building, 302 East Lexington street. Full details concerning the building recently mentioned.

Baltimore—Store Building.—John S. Bridges, 26 South Charles street, has commissioned George N. Mackenzie, third, architect, Builders' Exchange Building, 2 East Lexington street, to prepare plans and specifications for building to be located at 22 West Baltimore street. Structure to be seven stories high, 23x150 feet; brick with granite base and Indiana limestone trimmings; concrete foundations; steel beams; electric wiring and fixtures; sanitary plumbing; heating system; elevator. This building previously mentioned.

Baltimore—Store Building.—A. W. Jones, 697 West Mulberry street, has commissioned Tormey & Leach, architects, 323 North Charles street, to prepare plans and specifications for the alteration of and additions to store building located at 313 East 21st street.

Baltimore—Warehouse.—The W. E. Wood Company, 18 North Howard street, has purchased the property located at 18 North Howard street and will make extensive alterations to the four-story building on the site.

Baltimore—Restaurant.—Mrs. Annie E. Kelly has awarded contract to Henry S. Rippe, builder, 7 Clay street, for the construction of restaurant to be located at 29 South Gay street after plans and specifications by Robert S. Milker, architect, 1821 North Register street. Structure to be three stories high with basement, 21.6x30 feet; brick with granite base and Indiana limestone trimmings; concrete foundation; steel beams;

slag roofing; galvanized-iron cornice and skylight; metal frames and sashes glazed with wireglass; sanitary plumbing. Electric wiring and fixtures and heating system not included in contract. This building previously mentioned.

Baltimore—Business Building.—Tobias Simon, cloth plaiting, 215 North Liberty street, has purchased the property located at 121 and 123 West Saratoga street and will make extensive alterations to the four-story buildings on the site. The site is 33x184 feet.

Baltimore—Telephone Exchange and Office Building.—The Chesapeake & Potomac Telephone Co., 711 St. Paul street, has purchased property located on Light street near Baltimore street, and will erect telephone exchange and office building on the site, which is 49x147.7 feet.

Baltimore—Steamship Terminal.—The Chesapeake Steamship Co., 530 Light street, has purchased the property located at corner William and York streets with a view to increasing its terminal facilities. The lot is 19x262 feet.

Baltimore—Warehouse.—Revised plans and specifications have been made by Louis Levi, architect, 704 Union Trust Building, Charles and Fayette streets, for warehouse for Jacob Schoeneman, 319 West Baltimore street, to be located at 316 West German street. Structure to be four stories high with basement, 30x100 feet; Pompeian brick with granite base and ornamental terra-cotta trimmings; concrete foundation; steel beams and girders; columns; slag roofing; box chute; metal frames and sashes glazed with wireglass; sanitary plumbing. Heating apparatus, elevator, office partitions, electric wiring and tubing, and gas and electric fixtures not included in contract. Walter E. Burnham, Builders' Exchange Building, 2 East Lexington street; Frank T. Maguire, Pratt and Gay streets; J. & S. H. Lamb, 253 West Preston street; John A. Sheridan Company, 31 North Holliday street; Henderson & Co., Ltd., 218 West Fayette street, and Henry S. Rippe, 7 Clay street, have been selected to estimate on the construction. Estimates to be in March 10. This building previously mentioned.

Baltimore—Store Building.—George W. M. Crook, 17 West Biddle street, has awarded contract to B. H. Hayes, builder, 1121 Riggs avenue, for the construction of store building to be located at 419 East Baltimore street. Structure to be three stories high with basement, 20x65 feet; brick with granite base and stone trimmings; concrete foundation; steel beams; galvanized-iron cornices; electric wiring and fixtures; sanitary plumbing; heating system; cost to be about \$800.

Baltimore—Dwellings.—John F. Carter, builder, 1529 North Bruce street, will erect for himself nine dwellings to be located on Franklin street near Carey street. Structures to be two stories high with basement, each 13x19 feet; brick with stone trimmings; tile roofing; galvanized-iron cornices; gas fixtures; sanitary plumbing; heating systems; cost to be about \$300.

Baltimore—Store Building.—Charles D. Fisher, Wilson Building, 301 North Charles street, has awarded contract to John Cowan, builder, 146 West Madison street, for extensive alterations to store building located at 312 North Charles street after plans and specifications by Elliott & Emmart, architects, Union Trust Building, Charles and Fayette streets.

Baltimore—Store Building.—Charles D. Fisher, Wilson Building, 301 North Charles street, has commissioned Elliott & Emmart, architects, Union Trust Building, Charles and Fayette streets, to prepare plans and specifications for store building to be located at 29 West Baltimore street. The site is 29x155 feet. Sperry, York & Sawyer, architects, Calvert Building, were erroneously reported last week as having this work.

Baltimore—Restaurant.—Further details have been obtained concerning restaurant for Thomas Ryan, 438 Light street, to be located at 6 Light street. Structure to be three stories high with basement, 21x23 feet; brick with granite base and Indiana limestone trimmings; concrete foundation; steel beams; tile roofing; copper cornice; skylight; interior marble; metal ceilings; electric wiring and fixtures; sanitary plumbing; heating system. Henry S. Rippe, 7 Clay street; C. Sheehan & Son, 117 East Centre street, and E. Seckmann, 1808 North Chester street, have been selected to estimate on the construction.

Baltimore—Warehouses.—Further details have been obtained concerning two warehouses for the Sheppard and Enoch Pratt

Hospital, 317 North Charles street, to be erected at 210 and 212 East Lombard street and extending through to 209 and 211 Water street after plans and specifications by Chas. E. Cassell & Son, architects, 411 North Charles street. Structures to be four stories high with basement, 53.1x105.6 feet; brick with terra-cotta and copper trimmings; concrete foundations; steel beams; mill construction; slag roofing; copper cornices; metal frames and sashes glazed with wireglass. Elevators, heating systems, electric wiring and fixtures and plumbing not included in contract. John Cowan, 106 West Madison street; J. J. Walsh & Son, 1525 Maryland avenue; John Hiltz & Son, 3 Clay street, and Morrow Bros., 212 Clay street, have been selected to estimate on the construction. Estimates to be in March 17.

Baltimore—Bank.—Further details have been obtained concerning building for the German Bank, northwest corner Holliday and Lexington streets, to be erected at northwest corner Baltimore and Holliday streets after plans and specifications by Baldwin & Pennington, architects, 311 North Charles street. Structure to be one story high with basement, 30x100 feet; brick with stone trimmings; concrete foundation; steel beams and girders; fireproof; vaults; electric wiring and fixtures; sanitary plumbing; heating system. Henry S. Rippe, 7 Clay street; John A. Sheridan Company, 321 North Holliday street; Frederick Decker & Son, 1309 East Biddle street; George Runnecke & Sons, 305 St. Paul street; J. F. Stuckert & Son, 215 North Calvert street; Tattersson & Thuman, 114 North Liberty street; H. C. Smyser, 425 North High street; German & Co., southeast corner St. Paul and Pleasant streets; Henry Smith & Sons Company, 116 South Register street; George A. Fuller Company, 203 North street; Joseph Schamberger, 2215 East Baltimore street; A. J. Robinson Company, 39 West Franklin street; Henderson & Co., Ltd., 218 West Fayette street; Wm. Ferguson & Bro., 214 Clay street; J. J. Walsh & Son, 1525 Maryland avenue; Murphy Construction Co., 202 West Fayette street, and John Hiltz & Son, 3 Clay street, have been selected to estimate on the construction. Estimates to be in March 21.

Baltimore—Store Building.—James T. Den's will make extensive alterations to building located at 18 West Lexington street for J. W. Mealy Sons Company, Jewelers, 7 West Lexington street. Building will be two stories high, 24.6x32 feet; brick with marble base and stone trimmings; steel beams; tile roofing; tile flooring; electric wiring and fixtures; sanitary plumbing; heating system. John Stack & Sons, 250 West Preston street; Henry S. Rippe, 7 Clay street, and John Hiltz & Son, 3 Clay street, have been selected to estimate on the work.

Baltimore—Fish Market.—The Municipal Board of Awards, City Hall, will receive proposals for the construction of fish market to be located on Centre Market Space after plans and specifications by Simonson & Pietsch, architects, Hoen Building, 302 East Lexington street. Proposals will be received in two parts, one for the foundation work and the other for the superstructure. Structure to be two stories high, 135x200 feet; brick with granite base and Indiana limestone or terra-cotta trimmings; foundation to be of either spread-concrete system or concrete-caisson system; steel-frame construction fireproofed with concrete; tin roofing; reinforced-concrete construction for stairs, toilets, offices and corridors; ornamental iron; trussed roof; 26 steel rolling doors; galvanized-iron skylight; 25 dumbwaiters and speaking-tubes; electric wiring and fixtures; sanitary plumbing; heating system connected with outside supply. Plans and specifications may be obtained from the office of the Inspector of Buildings, City Hall, on and after March 6 by depositing certified check for \$50, made payable to mayor and city council of Baltimore. Proposals must be submitted on or before 11 A. M., March 22, to the office of Harry F. Hooper, city register, City Hall, accompanied by certified check for \$500 made payable to mayor and city council of Baltimore. Cost to be about \$120,000. Charles L. Stockhausen, National Marine Bank Building, Gay and Water streets, has obtained plans to submit estimate. This building previously mentioned. Henry S. Rippe, 7 Clay street; Charles McCaul Company, 123 West Saratoga street, and D. W. & G. H. Thomas, Vickers Building, German street near South street, have also obtained plans to submit estimates.

Baltimore—Warehouses.—Further details have been obtained concerning two ware-

houses for the Deford Company, Calvert and Lombard streets, to be located on Lombard, Grant, Hollingsworth and Matthews streets after plans and specifications by W. H. Hodges, architect, Wilson Building, 301 North Charles street. Structures to be five stories high, one 42.3x121.2 feet and the other 19.6x42 feet; red and gray brick with galvanized-iron trimmings; concrete foundations on piling; steel beams and girders; cast-iron columns; slag roofing; galvanized-iron cornices and skylights; granolithic pavement; vault lights; fire doors and shutters; electric wiring and fixtures; sanitary plumbing; heating system; two elevators. Morrow Bros., 212 Clay street; J. H. Miller, 110 Dover street; Wm. Steele & Sons, 17 West Saratoga street; John Cowan, 106 West Madison street; John Stack & Sons, 250 West Preston street; Cramp & Co., 407 St. Paul street; John Hiltz & Son, 3 Clay street, and R. H. Frazier & Sons, 220 St. Paul street, have been selected to estimate on the construction. Estimates to be in March 14.

Baltimore—Store and Office Building.—The Maryland Bible Society, Richard K. Cross, chairman, 19 East Lexington street, has awarded contract to Morrow Bros., builders, 212 Clay street, for the construction of store and office building to be located at 12 and 14 East Fayette street after plans and specifications by Sperry, York & Sawyer, architects, Calvert Building, Fayette and St. Paul streets. Structure to be five stories high with basement, 37.6x78.3 feet; brick with Indiana limestone trimmings; concrete foundations; steel beams; cast-iron columns; tin roofing; galvanized-iron cornice and skylight; first floor of reinforced-concrete construction; fire-escape; vault lights; copper frames and sashes glazed with wireglass; sanitary plumbing. Heating apparatus, electric wiring, telephone wiring and elevator car and machinery not included in contract. This building previously mentioned.

Baltimore—Warehouse.—August Oldenburg of Oldenburg & Kelley, plumbers, 300 Eastern avenue, has purchased the property located at 13 East Lombard street, and will erect four or five-story building on the site, which is 24x60 feet.

Baltimore—Warehouses.—Further details have been obtained concerning two warehouses for the Patterson estate, Arthur W. Machen, agent, Central Savings Bank Building, 3 East Lexington street, to be located at 104 and 106 South Frederick street, and contract for the construction of which has been awarded to John E. Marshall & Sons, builders, 212 North Calvert street. Structure to be four stories high, 40x75.8 feet; brick with stone trimmings; concrete foundation on piling; steel beams and girders; cast-iron columns; slag roofing; fire shutters; metal frames and sashes glazed with wireglass; galvanized-iron cornice and skylight; electric wiring and fixtures; sanitary plumbing. Elevators not included in contract.

Baltimore—Warehouse.—The Baltimore Sand & Contracting Co., Gay and Pratt streets, has purchased the property located at Front and Low streets, and will erect a five-story warehouse on the site, which is about 110x110 feet. Architect to prepare plans and specifications for the building has not as yet been selected.

### Manufacturing Buildings and Other Enterprises.

Baltimore—Paper-box Factory.—Further details have been obtained concerning building for the Bartgis Bros. Company, paper-box manufacturer, 1030 Linden avenue, to be located at 6 and 8 South Greene street after plans and specifications by Morris & Clifford, architects, 657 Calvert Building, Fayette and St. Paul streets. Structure to be four stories high with basement, 41.3x18.8 feet; brick with Indiana limestone or artificial-stone trimmings; concrete foundation; mill construction; slag roofing; galvanized-iron cornice and skylight; fire doors and shutters; fire-escape; sanitary plumbing; hand elevator. Electric wiring and fixtures and heating system not included in contract. Henry S. Rippe, 7 Clay street; Israel Griffith, Builders' Exchange Building, 2 East Lexington street; Ashland Construction Co., 1012 Ashland avenue, and Edward D. Preston, 140 West Fayette street, have been selected to estimate on the construction. Estimates to be in March 13.

Baltimore—Power-house.—Revised bids are being taken on power-house for the United Railways & Electric Co., 30 South Eutaw street, to be erected on East Pratt street, after plans and specifications by P. O. Kellholtz, consulting engineer, 30 South Eutaw







- Beaumont, Texas.—Business Building.—W. F. Treadaway has let contract for improvements to be made to the Treadaway-Junker Building at a cost of \$7000; improvements to include the installation of electric lights, steam heat, elevator and all modern facilities.
- Berkley, Va.—Store Building.—J. R. Williams will erect two-story brick building.
- Birmingham, Ala.—Hotel.—W. H. Woodward and associates, reported last week as having purchased site on which to erect 12-story brick and steel hotel to cost \$500,000, have organized the Jefferson Hotel Co. with \$125,000 capital stock.
- Charleston, W. Va.—Business Block.—Ruffner Bros. will erect five-story business block.
- Charleston, W. Va.—Lodge Building.—Elks' Building Association, recently incorporated with \$25,000 capital stock, has purchased the Germania Hall building and will expend \$10,000 in remodeling as lodge building. W. H. Lohmeyer is president.
- Charlotte, N. C.—Library Building.—W. W. Smith has contract at \$2063.88 for the erection of proposed library building at 2d and Brevard streets after plans by Hook & Sawyer.
- Charlotte, N. C.—Store Building.—Thomas W. Hawkins will erect two-story brick building, 31x50 feet.
- Charlottesville, Va.—Store Building.—T. E. Powers of Moormans River, Va., has had plans prepared by N. T. Wingfield for a three-story building, 40x110 feet.
- Chattanooga, Tenn.—Store Building.—The S. H. Kress Company will expend \$8000 in remodeling building at 606-608 Market street.
- Chattanooga, Tenn.—Apartment-house.—George C. Long of Buffalo, N. Y., has contract at \$107,000 for the erection of five-story brick and stone apartment-house for J. I. Lupton, 511 East 4th street, previously reported; to be equipped with steam heat, gas and electric lights. W. T. Downing prepared the plans.
- Columbia, S. C.—Hospital.—A. Ryan has contract to erect proposed \$20,000 building for the Columbia Hospital after plans by Shand & LaFaye, 1328 Main street.
- Columbus, Ga.—Warehouse.—Barlow Bros. have contract to erect warehouse for the Dan Joseph Company previously reported; to be one story, 70x140 feet.
- Columbia, S. C.—Cottages.—C. K. Oliver will erect a number of operatives' cottages, replacing those recently destroyed by fire at Brookland.
- Corsecan, Texas.—Courthouse.—Commissioners' Court of Navarro county, Corsicana, Texas, will receive bids until April 15 for the erection of courthouse in accordance with plans and specifications on file with the county clerk, Corsecan, and J. E. Flanders, architect, Dallas, Texas. Proposals to be on forms obtained from the architect and accompanied with a certified check for \$2000 payable to C. L. Jester, county judge. Usual rights reserved.
- Cuero, Texas.—Jail.—De Witt county will vote March 23 on the issuance of \$22,000 of bonds for the erection of jail. Address County Clerk.
- Cumberland, Md.—Theater.—The Theater Construction Co. of New York, N. Y., has had plans prepared by Fred W. Elliott of Columbus, Ohio, for proposed three-story brick, stone and steel theater.
- Dallas, Texas.—Apartment-house.—A permit has been secured for the erection of 7500 addition to the Majestic Apartment-House.
- Dallas, Texas.—Store Building.—The M. P. Exline Company has purchased site on which to erect the five-story building previously reported.
- Dickson, Tenn.—Opera-house.—John M. Smith has purchased site on which to erect opera-house.
- Dyersburg, Tenn.—Opera-house.—Scott & King contemplate organizing stock company for rebuilding opera-house reported burned last week at a loss of \$15,000. Site will be purchased.
- Dyersburg, Tenn.—Store Building.—Scott & King will erect four-story building on the site of opera-house reported burned last week.
- Elm Grove, W. Va.—Warehouse.—Atchison & Terrell have let contract to J. W. Degarmo for the erection of two-story warehouse 35x60 feet.
- Elm Grove, W. Va.—Dwelling.—Anthony Dusch will erect brick and stone residence at a cost of \$8000, and contract for construction will shortly be let.
- Fayetteville, Ark.—Church.—First Baptist Church will erect edifice of artificial stone 60x100 feet, heated with hot air and costing \$12,000. Architect has not been engaged.
- Fort Oglethorpe (P. O. Chattanooga, Tenn.), Ga.—Drill and Riding Hall.—Capt. Courtland Nixon, constructing quartermaster, and associates are organizing company for the erection of \$10,000 drill and riding hall.
- Fort Stockton, Texas.—Jail.—Pecos County Commissioners will consider the erection of jail building at the May term; John M. Odom, county judge.
- Georgetown, Ky.—Business Building.—Louis Pieri is arranging for the erection of a modern business building.
- Glasgow, Ky.—Jail.—Barren county contemplates erecting jail building. Address County Clerk.
- Goodall, Fla.—Apartment-house.—Dr. John A. Van Valzah of Daytona, Fla., reported last week as to build apartment-house, will erect three-story building of artificial stone 50x52 feet, heated by steam and lighted by electricity, tile roof; cost \$20,000. The work will be under the supervision of Contractor Johnson.\*
- Greensboro, Md.—Bank Building.—The Caroline County Bank has purchased site on which to erect bank building.
- Hot Springs, Ark.—Store Building.—Sheriff Williams, it is reported, will erect \$20,000 store building to replace structure recently burned.
- Hot Springs, Ark.—Hotel.—The Moody Hotel, reported burned last week, will be rebuilt at a cost of \$100,000.
- Hot Springs, Ark.—Courthouse and Jail.—Garland county will rebuild courthouse and jail reported burned last week, and plans are being prepared by W. R. Parsons & Son Company, Des Moines, Iowa.
- Houston, Texas.—Store Building.—The Wadell Furniture Co. has accepted plans by Cook & Co. for improvements to store building at a cost of \$40,000; three additional stories will be added.
- Houston, Texas.—Fire Station.—A Lipper, city secretary, will open bids March 13 for the construction of two-story brick fire station according to plans and specifications on file in office of S. A. Oliver & Co., architects, 311 1/2 San Jacinto street. Certified check for \$500 on a Houston bank must accompany each bid. City reserves usual rights.
- Jackson, Miss.—Bank Building.—Hugger Bros. of Montgomery, Ala., have contract to erect proposed three-story building for the Capitol National Bank.
- Jackson, Miss.—Institution Building.—P. J. Krouse of Meridian, Miss., is preparing plans for \$30,000 building for the Methodist Orphanage previously mentioned, and bids for the construction will shortly be asked.
- Jackson, Miss.—Business Building.—Martin & Gaddis will erect four-story brick building.
- Kansas City, Mo.—Automobile Garage.—John T. Neil has contract to erect one-story brick building at 1108 to 1114 East 15th street for Doddridge & Duncan.
- Kansas City, Mo.—Apartment-houses.—Dr. J. A. McMasters, 1369 East 9th street, has let contract to Matt O'Connell for the erection of two three-story apartment-houses at a cost of \$25,000 each.
- Kansas City, Mo.—Dwelling.—E. D. Ashley has permit to erect two-story brick residence to cost \$9000.
- Kansas City, Mo.—Apartment-house.—D. A. Frank has permit to erect three-story brick apartment-house at 3800 to 3815 Walnut street at a cost of \$20,000.
- Knoxville, Tenn.—College Building.—Barber & Klutz have completed plans for proposed college building at Kimberlin Heights, replacing structure recently burned; building to be three stories, of brick, 86x136 feet.
- Knoxville, Tenn.—Dwellings.—W. E. Brown of Augusta, Kans., is having plans prepared by Barber & Klutz for the erection of residence. Same architects will prepare plans for residence for John T. Heard of Sedalia, Mo.
- Knoxville, Tenn.—Dwelling.—Baumann Bros. have completed plans for residence for M. F. Rourke.
- Knoxville, Tenn.—Store Building.—A. J. Cloyd has contract to erect proposed five-story brick building for the Woodruff Hardware Co. after plans by Baumann Bros.
- Lawrenceburg, Ky.—Church.—The Lawrenceburg Presbyterian Church will rebuild edifice reported burned last week at a loss of \$10,000. Architect has not been engaged; L. Humphreys, pastor.
- Lumberton, N. C.—Warehouse.—Caldwell & Carlyle will build during the summer brick warehouse, 50x200 feet, equipped with automatic sprinkler system. This company's warehouse was reported last week as burned.\*
- Lynchburg, Va.—Fire Station.—Plans by Lewis & Burnham have been accepted for proposed two-story brick fire station, 42x66 feet.
- Macon, Ga.—Dwelling.—Henry J. Lamar will replace dwelling burned by a \$15,000 brick residence.
- Marion, Va.—Courthouse.—Bids will be received until April 12 for the erection of Smyth county courthouse in accordance with plans and specifications on file at Marion, Va., and at the office of Frank P. Milburn, architect, Columbia, S. C. For circular of particulars address J. P. Sheffey, Jr., secretary building committee, Marion, Va.
- Marlin, Texas.—Dwelling.—Mrs. V. C. Billingsley is having plans prepared by W. W. Dudley of Waco, Texas, for the erection of \$5000 residence. Bids for the construction will be received about April 1.
- Memphis, Tenn.—Business Building.—The Snowden estate will erect three-story business building with stone front at Main and Washington streets.
- Memphis, Tenn.—Hospital.—A site has been purchased at Union and Middle streets on which to erect proposed Woman's Hospital to cost about \$40,000 after plans by Meyer Sturm of Chicago, Ill. Mrs. W. S. Crawford is chairman of board of lady managers.
- Montgomery, Ala.—Warehouse.—The Roman Cotton Co. is having plans prepared for the erection of \$50,000 cotton warehouse.
- Montgomery, Ala.—Church.—Contract has been let for the erection of proposed edifice for the First Baptist Church after plans by G. L. Norrman of Atlanta, Ga. C. A. Stakley, D. D., is pastor.
- Mt. Sterling, Ky.—Business Building.—Carroll C. Chenault has let contract for the erection of two-story business building.
- Mt. Sterling, Ky.—Lodge Building.—The Odd Fellows' lodge is arranging for the erection of \$25,000 building; to be three stories, of brick and stone.
- Nashville, Tenn.—College Building.—Belmont College is arranging for the erection of \$30,000 addition.
- Nashville, Tenn.—Dwellings.—R. H. McGavock will erect two-story brick residence at a cost of \$6000. Thomas J. Mann has permit to erect two-story brick residence to cost \$5000.
- Nashville, Tenn.—Business Building.—Marshall & Bruce Company is having plans prepared by J. H. Yeaman for the erection of four-story building of pressed brick and stone, 70x175 feet, to cost \$75,000.
- New Martinsville, W. Va.—Masonic Temple.—F. W. Clark, president Wetzel Lodge Masonic Association, New Martinsville, will receive bids until March 25 for the erection of Masonic Temple; to be four stories, of brick and stone. Plans and specifications may be seen at office of J. P. Chapin, architect, New Martinsville. Certified check for \$500 must accompany each bid. Usual rights reserved.
- New Orleans, La.—Store Building.—Louis P. Rice will erect six or seven-story building, 80x130 feet, to be occupied by the Williams-Richardson Company, Ltd.
- Paducah, Ky.—Store Building.—Niemann & Acree have contract to erect three-story building for M. Livingston & Co., previously reported; cost \$10,000.
- Pensacola, Fla.—Theater.—Bids are to be taken at once for the erection of proposed theater; to be constructed of brick and stone, galvanized iron, iron columns, metal roof, ornamental work for boxes and balcony front, seats for 1500 persons, stage fittings, scenery, etc.; Ausfeld, Chapman & Frederic, architects in charge.
- New Orleans, La.—Hotel Improvements.—Toledano & Wogan of New Orleans and H. C. Kock of Milwaukee, Wis., are preparing plans for annex previously reported to be built to the Hotel Grunewald, Theodore Grunewald, proprietor. Architects can be addressed in care of the hotel after March 10.
- New Orleans, La.—Dwelling.—Charles Durr has purchased site at State street and St. Charles avenue on which to erect residence.
- New Orleans, La.—Clubhouse.—The Young Men's Hebrew Association has purchased additional site on which to erect clubhouse, replacing structure recently burned; building to be fireproof and equipped with natatorium, gymnasium, etc.; cost \$200,000. Stone Bros. and Emilie Weil have been engaged to prepare the plans.
- New Orleans, La.—Store Building.—Abe Meyer has contract to erect proposed six-story pressed-brick building for Jos. Levy & Bros., 521 Common street; structure to be of mill construction, 60x100 feet.
- New Orleans, La.—Store Building.—Stauffer, Eshleman & Co. have purchased site on Canal street on which to erect proposed store building.
- Newport News, Va.—Bank Building.—The Newport News National Bank has purchased site at 2612 Washington street and will erect brick building to cost \$12,500.
- Newport News, Va.—Hotel Improvements.—Reports state that C. F. Hundley, manager of the Hotel Newport, will expend \$3000 in improvements to hotel.
- Norfolk, Va.—Business Block.—J. F. Barbour & Co. of Roanoke, Va., have contract to erect three-story business block, 50x55 feet, of press brick, stone, structural iron and steel work, tin roof and concrete flooring for Thomas & Morton; cost \$11,500; H. H. Huggins, Roanoke, Va., architect.
- Norfolk, Va.—City Hall.—A bill has been introduced in the city council to appropriate \$250,000 for the erection of city hall. Address The Mayor.
- North Fort Worth (P. O. Fort Worth), Texas.—School Building.—City will vote March 28 on the issuance of \$23,000 of bonds for the erection of school building. Address The Mayor.
- Olympia, Ky.—Hotel, etc.—Incorporated: The Olympian Springs Co., with \$60,000 capital stock, and T. T. Forman, president; E. L. Hutchinson, vice-president; Rudolph R. Harting, secretary, and Mat Walton, treasurer. The company has let contract to the Lexington (Ky.) Lumber & Manufacturing Co. for the erection of 55-room hotel after plans by Martin Goertz of Lexington, Ky.; cost \$25,000. Messrs. Harting, Forman and associates were reported in December as having purchased the Olympian Springs property and to erect hotel, etc.\*
- Palatka, Fla.—Warehouse.—Curran R. Ellis, Macon, Ga., has completed plans, and contract will be let in a few days for the erection of terminal warehouse, 58x154 feet, reported last week to be built by the Georgia Southern & Florida Railway; J. J. Galliard, chief engineer, Macon, Ga.
- Richmond, Va.—School Building.—C. P. Walford, clerk and supervisor, Richmond, Va., will receive competitive designs until April 17 for a new high-school building. All designs to be accompanied by plans and general specifications. Committee reserves usual rights. Further information furnished on application.
- Rovista, Texas.—School Building.—The issuance of \$5000 of bonds has been voted for the erection of school building. Architect has not been engaged. Address C. H. Coffman, secretary school board.
- Rome, Ga.—Infirmary.—Reports state that Dr. B. D. Austin will build an infirmary, and contract for the construction has been let.
- Shawnee, O. T.—Library Building.—C. C. Campbell has contract at \$14,000 for the erection of Carnegie Library building for which S. Wemyss Smith of Fort Worth, Texas, was previously reported as having prepared the plans.
- Sherman, Texas.—Warehouse.—The Pittman-Harrison Company has let contract for the erection of addition which will give a storage capacity of 125,000 bushels.
- Spray, N. C.—Dwelling.—Dr. George A. Mebane will erect residence.
- Springfield, Mo.—Warehouse.—Reed & Hecknively are preparing plans for a \$3000 brick warehouse to be built by the Pabst Brewing Co. of Kansas City, Mo.
- Springfield, Mo.—Hotel Improvements.—It is reported that a brick addition with slate roof will be built to the Metropolitan Hotel at a cost of \$10,000.
- Springfield, Mo.—Hotel.—J. A. Schmook is reported to erect four-story hotel of press brick with gravel roof to cost \$10,000 at South and Walnut streets.
- Springfield, Tenn.—Store Building.—Thompson, Gibel & Asmus, Nashville, Tenn., are preparing plans for store building reported last week to be erected by Dulin, Glenn & Co.; structure to be 96x150 feet.\*
- St. Augustine, Fla.—Hotel Improvements.—S. C. Edminster has contract to build another story to the St. George Hotel.
- St. Louis, Mo.—Store and Office Building.—Dnn C. Nugent and associates will erect five-story store and office building at a cost of \$100,000.
- St. Louis, Mo.—Hospital.—J. L. Wees, 520 Olive street, has completed plans for proposed Evangelical Deaconess' Hospital, to be erected at a cost of \$100,000.
- St. Louis, Mo.—Clubhouse.—The Jefferson Club will organize company with \$100,000 capital stock for the erection of clubhouse on site recently purchased at Grand and Laclede avenues. Architects have been engaged.
- Terrell, Texas.—Church.—The Presbyterian congregation is arranging for the erection of \$10,000 edifice. Address The Pastor.
- Tifton, Ga.—Hotel.—It is reported that Irvine Myers and associates will erect \$60,000 hotel on the site of the Hotel Sadie, reported burned last week.
- Titusville, Fla.—Hotel.—Northern capitalists, it is reported, will erect \$30,000 hotel, and W. H. McFarland will be manager.







plants. The manufacture of these dogs is a specialty with some factories, and among the successful ones is the product of the Southern Engine and Boiler Works at Jackson, Tenn. This company makes the Southern Saw-Mill Dogs described and illustrated in a leaflet now being distributed.

#### On Heating and Ventilation.

The New York Blower Co. has issued a new sectional catalogue, No. 55, on heating and ventilation. It contains a full description of the different styles of the company's new heater, shows some of the different styles of hot-blast apparatus, and then several applications of the company's heating and ventilating system. The catalogue may be had for the asking by writing to the office at 25th Place and Stewart avenue, Chicago.

#### Cortright Metal Shingle Advocate.

The March number of the Cortright Metal Shingle Advocate will interest architects, building contractors and all owners of houses. It presents some data that will enable readers to be prepared to make a suitable selection when they are ready to buy roofing that gives the best possible results both from the standpoint of economy and appearance. The Cortright Metal Roofing Co., Philadelphia, Pa., publishes the Advocate.

#### The Sumter Telephone Calendar.

There is now being distributed by the Sumter Telephone Manufacturing Co. of Sumter, S. C., a 1905 calendar which will find a prominent position in every establishment to which it is sent. This calendar has large date and month pads, so that they can be read from a distance. It also presents a view of the extensive plant of the Sumter company, where high-grade telephones and other necessary telephone equipment is manufactured.

#### Weinman Pumping Machinery.

The latest designs of modern pumping machinery for all purposes as built by the Weinman Machine Works are shown in a leaflet now being distributed. The publication lists a few of the machines—steam pumps, power pumps, air compressors, deep-well pumps and supplies—which the Weinman company has perfected, and which are in demand wherever exacting users of pumping machinery are requiring such apparatus. The Weinman Machine Works has its extensive manufacturing plant as well as its main offices at Columbus, Ohio.

#### Refrigerating and Ice-Making Machinery.

The De La Vergne Ice and Refrigeration Bulletin states that the embodiment of the best modern engineering practice is found in the De La Vergne machinery. Owners who contemplate making a new installation or replacing or making additions to established plants and equipment are invited to consult the De La Vergne Machine Co., and thus obtain the benefit of the company's broad experience. This company's equipments are built in sizes of from 5 to 500 tons capacity. Address the main offices at the foot of East 138th street, New York.

#### How to Read Wattmeters.

Electricity is a commodity which is measured accurately for barter and sale, although to the person unacquainted with the subject it is enveloped in doubt and mystery. In the interest of a clear knowledge of how to read wattmeters there has been issued a little booklet called "Wattmeters and How to Read Them." The Westinghouse Electric & Manufacturing Co. of Pittsburgh, Pa., is sending this booklet to those who ask for a copy. It will tell you all about the wattmeter and enable you to obtain a definite idea regarding the quantity of electrical energy you use in your home, office or factory.

#### Burning Questions—Electric Lamps.

Burning questions are referred to in several leaflets now being issued for the purpose of informing incandescent electric lamp users how to economize in obtaining their supply of such lamps. These leaflets tell about the taking of burned-out lamps of standard make, thoroughly overhauling them, cleaning them, re-exhausting them, inserting new filaments of the best known material and delivering the rebuilt lamp in a condition that makes it equal to the original new lamp. The Economy Electric Co. of Warren, Ohio, does this. Write the company for prices and information regarding its specialty.

#### Improved Bonar Oil Filters.

Messrs. James Bonar & Co., Frick Building, Pittsburg, Pa., have issued an illustrated leaflet regarding their Improved Bonar oil filters, separators and purifiers. The corporation has had many years' experience in the

oil-filter business, and recently acquired the Conn patents, which they have combined with the Hubbard patents. The results obtained are remarkable in the filtration of impure waste oil. In addition the company maintains its gravity-distillation system, combining it with the cloth filtration. Send for this leaflet and learn how the Bonar equipments are operated in the interest of economy wherever used.

#### Jackson, Miss.

The capital of Mississippi is Jackson, one of the most progressive cities in the State. Jackson offers many advantages as a location for manufacturing and other enterprises, as well as to the homeseeker looking for a place where his interests can best be advanced. The city has modern water-works, sewerage and lighting systems, and is located in a territory from which raw materials can be obtained at minimum prices for various kinds of factories, and its transportation facilities permit of prompt shipments to the available markets. The Jackson Board of Trade has issued a booklet that tells all about Jackson, and copies will be forwarded to inquirers.

#### Economical Gas and Oil Engines.

The De La Vergne Power Bulletin presents some brief yet interesting and complete facts regarding the introduction of gas and oil engines. It tells how gas and oil engines are taking the place of electric and steam power plants in many instances, and refers to the economy effected in various ways by the use of such engines. The Koerting Gas Engine and the Hornsby-Akroyd Oil Engine are illustrated and in brief form their perfection in operation is mentioned. The Koerting is built from 65 to 3000 horsepower, and the Hornsby-Akroyd from 1½ to 125 horsepower by the De La Vergne Machine Co., foot of East 138th street, New York city.

#### The Ridgepole.

People who are interested in good roofing should not fail to examine the Ridgepole for February. This little publication comes every month from Messrs. J. A. & W. Bird & Co. of Boston to tell about the firm's celebrated Rex Flintkote Roofing. This is the roofing which was awarded the grand prize at the Louisiana Purchase Exposition, and was used to cover the buildings of that exposition. The Ridgepole contains facts and figures relative to the superior qualities of Rex Flintkote Roofing, and shows why contractors, building owners, architects and others seeking the best advantage will find their needs met with the article. Send your name and address for the mailing list.

#### Flexible Steel-Armored Hose.

It has been many years since hose for the transmission of steam or air was placed on the market. Recently the Sprague Electric Co. has introduced important improvements in such hose, and offers to users the Flexible Steel-Armored Hose. This hose consists of a suitable rubber hose covered with a tight-fitting flexible steel armor, thus protecting the rubber hose against mechanical injury, as well as many other causes which shorten the life of the plain rubber hose. Bulletin No. 36 has been issued to give full details as to the construction of this new hose, and interested parties are invited to write for copies of the publication. Address the Sprague Electric Co., 527 W. 34th street, New York.

#### Portable Railway-Repair Tools.

Users of portable tools for railway repair shops will find information of value to them in H. B. Underwood & Co.'s catalogue of special tools for repair shops. This department is under the direct supervision of D. W. Pedrick, who has severed his connection with the Pedrick & Ayer Company, and who has for many years been active in designing and building this line of tools and is well known to the trade. Underwood & Co. propose to maintain their previous reputation of making high-grade tools and doing high-grade work, keeping up with the requirements of the times. Their guarantee is broad and their prices are moderate. Write to Messrs. H. B. Underwood & Co., 1025 Hamilton street, Philadelphia, Pa., for latest illustrated catalogue.

#### Labor-Saving Tools.

The Ingersoll Sergeant Drill Co., 26 Cortlandt street, New York, has issued the first of a series of bulletins regarding labor-saving tools operated by compressed air. The first bulletin, No. 2000, describes the Macdonald Rivet Forge, which is designed to meet the requirements for heating rivets in connection with riveting upon bridge, ship, boiler and general outside steel construction work upon which pneumatic tools are usually employed and compressed air is therefore available. The new series of bulletins will be

issued by the pneumatic-tool department of the Ingersoll-Sergeant Drill Co., and each issue will possess the distinctive color and the same neat typographical appearance as the first number. Send your name for the company's mailing list.

#### The Roper Harness Motion.

Abundance of raw material is not the only essential factor in the advance of the Southern cotton-manufacturing industry. Abundance of proper help is also requisite, and good help is said to be very scarce in cotton-manufacturing centers. This emphasizes the necessity for using the latest labor-saving machinery, and to be posted on the latest developments in such equipment one should read Cotton Chats. The February issue of this publication tells about the Roper harness motion and the economies brought about by its use, besides referring to other apparatus that progressive cotton-mill owners will be interested in. The Draper Company, the well-known cotton-machinery makers, Hopedale, Mass., publishes Cotton Chats. Write to be put on the company's mailing list.

#### As the Photographer Saw Us.

A place where trading is made easy, where red-tape methods are unknown, where the word guarantee is truthfully interpreted—such a place is especially sought by buyers of electrical machinery, and they will find views of it presented in "As the Photographer Saw Us." This publication illustrates the plant of the Guarantee Electric Co. of Chicago, which carries a stock approximating 600 dynamos and motors of standard make, and is prepared to quote low prices and make prompt deliveries. The company purchases second-hand apparatus and puts it in perfect working order before offering it to purchasers. Each machine is operated at its rated load in the presence of the superintendent or manager before shipment. If you are seeking electrical machinery of any kind, write the Guarantee Electric Co. for a copy of booklet.

#### Regarding Compressed Air.

"Compressed Facts About Compressed Air" is the title of a booklet by the Clayton Air Compressor Works, 114 Liberty street, New York city, giving "a resume of the points to be considered in buying an air compressor of medium capacity." After an introductory quotation from Andrew Carnegie that "a small saving in each process means fortune," brief chapters are devoted to the following topics: "Economy of Compressed Air," "Features of a Money-Saving Air Compressor," "How Those Features Are Combined in a Good and Medium-Priced Machine," "Method of Driving Air Compressors," and "Some of the Uses of Compressed Air." It is worthy of note that under the last are enumerated 139 distinct applications of compressed air, and the list is by no means exhaustive. Illustrations showing some type of compressor or part thereof adorn every page, and the pamphlet is printed on a high grade of India tint paper and bound in blue and gold. It contains 32 pages, and is standard in size, measuring 3½x6 inches.

#### Newton Vertical Milling Machines.

Newton catalogue No. 40 presents illustrations of a number of different designs of vertical milling machines, both belt and direct motor driven, which are made extra heavy, rigid and powerful to meet the demands of the locomotive and railroad machine shops, for which they are specially adapted. The circular carriage of machines has a dish or trough for holding the lubricant, and has variable automatic circular, cross and in and out feed motion in either direction, the feed motions being controlled by independent clutches, conveniently placed. The spindle is fitted with a taper hole and threaded on the outside, and lower spindle bearing has an adjustment by hand. When desired, machines will be fitted with vertical power feed to spindle head, and with a self-contained crane. Machines are all fitted with pump, piping and necessary attachments for cutter lubrication. They are made by the Newton Machine Tool Works of Philadelphia, Pa. Correspondence is solicited for any special or standard tools required.

#### Ice Manufacture and Refrigeration.

A complete description of the absorption process of artificial-ice manufacture and refrigeration is presented in illustrated leaflets now being distributed. The subject is made as plain as possible, the process being shown in such a manner as to be readily understood by the layman as well as the engineer. It may be briefly said of the absorption process that the manufacturing is continuous, one detail of the operation not delaying another. So simple is the machinery employed that any person of ordinary intelligence can learn to operate a machine successfully after a

week's experience. The advantages of the absorption process are presented lucidly, so that not only those who are to build ice or refrigeration plants, but also those now using machinery for that purpose will be deeply interested in the superior results to which attention is called. Many plants of this type are in operation to the great satisfaction of their owners throughout the South and in other parts of the country. They are manufactured and installed by the Columbus Iron Works Co. of Columbus, Ga.

#### C. Regenhart's International Guide.

Regenhart's International Guide for merchants, manufacturers and exporters contains the addresses wanted every day by firms in foreign business. However remote a place may be, if business of any importance is transacted there, the book gives all the particulars that are of service to the merchant—data re shipping intercourse, consular and customs service, number of inhabitants, the leading banks and law firms, commission and forwarding agents, etc. Any special information, such as reliable reports on business concerns, trade lists, etc., may be obtained from any town direct through the Regenhart correspondents. Consuls of all nationalities, many first-rate commercial houses and more than 15,000 correspondents assist every year in promoting the directory. The contents and its arrangements have been steadily improved during 29 years, and the mass of data is so classified and indexed that it is readily accessible. By the use of thin Bible paper the publisher has added much to the practical value of the work in making it a handy edition. This is much appreciated by a great number of commercial travelers to whom the Regenhart directory has been a favorite companion for many years. The 1905 edition is now ready, price \$1.50. Address C. Regenhart's Agency, 11 Broadway, New York.

#### Gisholt Machine Tools.

The importance of a proper tool equipment for special machines is well understood by their users. From the outset it has been the aim of the Gisholt Machine Co. to furnish machines and tools capable of turning out a large amount of work with comparatively inexpensive tool outfits, constructing the tools so that they are suitable to a large range of work and at the same time quickly adjustable from one piece to another. In designing its tools the Gisholt Machine Co.'s main object has been to avoid the necessity of discarding expensive tools whenever a change is made in the design of the parts being manufactured. When Gisholt machines are once equipped with boring tools and arbors for standard holes the necessary addition to the tool equipment for producing any ordinary pieces can be made at comparatively small cost. In disseminating literature telling about its tools the Gisholt Machine Co. has taken especial care. Its latest publication, one of a series of leaflets for which a binder has previously been distributed, is especially creditable. It is illustrated by photographic reproductions and is mailed between pasteboard, so as to protect from creasing or scratching. The Gisholt Machine Co. is of Madison, Wis., and invites users of machine tools to write for information of value to them.

#### De Laval Centrifugal Pumps.

The advent of the steam turbine affords a motor capable of such high speeds that not only are centrifugal pumps available for the entire range of heads under which the piston pumps operate, but they can generate these heads with less impeller diameter for a given capacity than was necessary with the older centrifugal pumps, with their limited heads. Thereby the hydraulic friction of the impeller is reduced and the efficiency of the pump correspondingly increased. The De Laval Steam Turbine Co., early realizing these possibilities, devoted itself to the developments of centrifugal pumps of the simplest, or single-guide-vane type, adapted for direct connection to its steam turbine, and found them not only a reliable means of pumping against high heads, but capable of a degree of efficiency considerably superior to that which had been heretofore available for such pumps. The De Laval Steam Turbine Co. therefore entered the market as a maker of a line of such centrifugal pumps, driven either by a steam turbine or by an electric motor, and manufactured as one unit, the pump and motor being mounted on a common bedplate directly connected by flexible couplings. These equipments are assembled complete and subjected to exhaustive test at the Trenton (N. J.) works, and are shipped as one unit. Therefore, as soon as placed upon their foundations and steam and water connections made they are ready for immediate operation. As all moving parts rotate, and as they are perfectly balanced, heavy founda-

tions are not necessary. The De Laval Steam Turbine and Electro-Motor Centrifugal Pumps are fully described and illustrated in a publication which the company is now distributing to interested parties. For a copy write the De Laval Steam Turbine Co.; executive offices, 74 Cortlandt street, New York.

#### Take An Ocean Voyage!

It is a somewhat curious fact that to the average American "an ocean voyage" means a voyage to Europe, which, when he allows his thoughts to turn to it as an experience, presents itself to his mind only as the long and expensive transatlantic trip. He seems unaware that it is possible to take an enjoyable "ocean voyage," coastwise, on a luxuriously-appointed steamer at a comparatively slight expenditure of time and money. The Merchants & Miners' Transportation Co., whose ships ply between Boston, Providence, Baltimore, Newport News, Norfolk, Savannah and Philadelphia, has apparently noted this mental peculiarity of the average American and taken measures to correct it by issuing a handsome folder full of interesting information about its line, its history, its vessels, its rates, its routes and its ports. It draws a most alluring picture of ocean-voyaging under the most comfortable circumstances. No transatlantic liner is a more luxuriously-appointed floating hotel than is each of the big iron and steel ships of the Merchants & Miners' Line. No transatlantic liner carries its passengers through more pleasant waters. If you feel that a brief and inexpensive sea voyage would be a delightful holiday for you, or if you have occasion to make a journey northward or southward for business, write any agent of the company or W. P. Turner, general passenger agent of the Merchants & Miners' Transportation Co., Baltimore, Md.

#### Soft Water.

A most interesting publication is the illustrated pamphlet entitled "Soft Water," now being distributed among those whom its contents will benefit. Many persons are versed in the necessity of a modern system for the elimination of the deleterious properties found in water for manufacturing and domestic purposes. They will find "Soft Water" presents some timely and valuable data for their consideration. The book tells about water softening plants, which are not new and untried. On the contrary, they have been fully proven, and date back to the discoveries made by Dr. Clark of Aberdeen, Scotland, in 1841. The system described is the Greer, installed by the Greer Filter Co. of Philadelphia, Pa.; offices in the Perry Building. This company has built some of the best-known filter plants in the country, including that which purifies the water for 35,000 horse-power of boilers at Ensley, Ala., for the Tennessee Coal, Iron & Railway Co. The steam from which this water comes is pollution only. The Greer Filter Co.'s book presents views of a number of important plants which the company has installed, besides giving facts and figures regarding the Greer system, its parts and how the water softening is perfectly done by the completed plants. Manufacturers and other workers in the industrial field are invited to send for a copy of "Soft Water," as a perusal of its contents will furnish valuable information for consideration.

#### The Marmon Motor Car.

The attainment of perfection in motor-car construction is not left entirely with pioneers in the field. It is possible for others who have inventive genius, experience, mechanical ability and facilities to make great strides in this direction. Plenty of room for improvement has been the incentive to American inventors, and the results have brought prominence and success to American machines. In the development of the Marmon Motor Car the endeavor has been to excel the best of foreign and American-made automobiles. The principle of construction has been given the greatest consideration. The Nordyke & Marmon Co. of Indianapolis, Ind., builds the Marmon Motor Car. It began early in 1902 to develop and perfect the machine, and in 1904 a number of the cars were sold embodying the double three-point suspension, the four-cylinder air-cooled engine, bevel-gear drive, double side entrance tonneau and other features prominent in the 1905 model. These cars have since been in use in very hilly and level country, over good and bad roads, and have been subjected to the severest practical tests which any machine could be expected to withstand. In speed, endurance, hill climbing on direct drive, durability, cost of maintenance and economy in operation the Marmon cars have even surpassed the expectation of both builder and buyer. The 1905 model has the features which have proven so successful, and has been improved in refinement of construction. The reputation of the Nordyke &

Marmon Company because of its previous successes in the mechanical world is in itself a guarantee that the Marmon Motor Car must be at least equal to anything of its character now on the market, otherwise it would not be offered to automobile users. Circular No. 530, issued by the company, explains in plain words the details of construction and sets forth the advantages of the several features which distinguish the Marmon car. Send for a copy.

#### Economizing Steam Specialties.

The constant study of the world's best engineers since the inception of steam as a prime mover has been the economic production of power. Their efforts have resulted in obtaining the greatest possible amount of energy from the steam, this being effected by the use of various economical steam specialties. In the manufacture of these specialties the Williams Gauge Co. has been especially prominent and successful. Among well-known users of Williams apparatus may be named the Westinghouse Electric & Manufacturing Co., Carnegie Steel Co., National Tube Works, Jones & Laughlin Steel Co., American Steel & Wire Co., Pressed Steel Car Co. and many others. The Williams steam specialties include safety feed-water regulators, auxiliary feed-water regulators, high-pressure steam traps, rotating regrounding gauge cocks, steam-pump governors, safety water columns, chain lever water gauges, etc. "Economizing Steam Specialties" is the title of the Williams Gauge Co.'s twenty-eighth booklet regarding its products, which are the direct result of 22 years' experience in this branch of design and manufacture. All the devices are illustrated and fully described, and photographic views are shown of some of the largest power plants using the Williams equipments for economizing in the making of steam and using it for power purposes. Write for a copy, addressing the main offices at 543-545-547 Fourth avenue, Pittsburgh, Pa.

#### Hendricks' Commercial Register.

The fourteenth annual edition of Hendricks' Commercial Register is now ready for distribution. It is intended for the use of buyers and sellers, being especially devoted to the interests of the architectural, mechanical, engineering, contracting, electrical, railroad, iron, steel, mining, mill, quarrying and numerous other industries of the United States. This book comprises a complete and reliable index of the industries referred to, containing over 35,000 names, addresses and business classifications. It has full lists of the manufacturers of and dealers in everything employed in the manufacture of material, machinery and apparatus used in these vast industries, from the raw material to the manufactured article, and from the producer to the consumer. Business establishments which have used previous editions of Hendricks' Commercial Register are well aware of its great usefulness as an office adjunct, and those who are not acquainted with it are advised to become so without delay. The register is indispensable as a buyers' reference for the architect, engineer, contractor, manufacturer, jobber, retailer, purchasing agent, and for railroad, machine shop, foundry, mill, factory, mine and plantation. For mailing purposes the book is indispensable. The contents are classified and indexed and arranged for the most convenient use. Messrs. Samuel E. Hendricks & Co., 76 Elm street, corner of Franklin, one block east of Broadway, New York, are the publishers, the price being \$7.

#### A Handsome Catalogue of Woodworking Machinery.

It is not often that such a handsome and complete catalogue of woodworking machinery is distributed as that which the H. B. Smith Machine Co. of Smithville, N. J., has prepared for presentation to its present and prospective purchasers. This catalogue is a clothbound volume 8x11 inches, with over 600 pages of text and illustrations referring to the numerous Smith woodworking machines, all of which have been designed and made in the Smith works. It is now 72 years since H. B. Smith first began building his machines and created the nucleus from which has developed the extensive business. He patented the blind-stile mortiser in 1847; then followed molders, later tenoners, reciprocating power mortisers and other classes in rapid succession, and today new machines are being evolved in the plant for early introduction to progressive managers of establishments wherein woodworking machines have their uses. The H. B. Smith catalogue presents a history of the industry, some 32 pages being devoted to this, and including photographic reproductions of the big plant, of medals and other awards of merit which the company has received for its machines in various expositions both in this country and in foreign countries. Moreover, the

company points with pride to the fact that H. B. Smith machines are used in the leading manufacturing everywhere, and the demand for them grows so steadily that enlargements and improvements to the already large plant are constantly being made. Any buyer of woodworking machinery wanting to obtain the best possible results in this class of equipment will not fail to confer with the H. B. Smith people before awarding contracts. Those who are acquainted with the Smith designs are well aware of their superior merit. The awards above mentioned include gold medal at St. Louis, Buffalo, Paris, International Export Exposition, Philadelphia; Atlanta, American Institute medals, etc.

#### Important Facts for Coal Consumers.

An interesting booklet is "Important Facts for All Consumers of Coal," which tells about the famous coal fields of West Virginia and quotes from the accepted and authorized reports of the West Virginia State geologist as to the noted coal seams in that region. The miners and shippers of the New River areas claim that New River coal is a continuation of the famous Pocahontas vein and has the same valuable steaming properties. Facts are also presented in exhaustive tests of New River coal by the United States Navy Department. Speaking of the coal coming from the region where New River products is mined the West Virginia State report says: "Coal of the Pottsville series, whether in the Gauley, New River or Flat-Top district, is an ideal steam fuel. Low in volatile matter and high in fixed carbon, while very low in ash, sulphur and moisture, these coals give off an intense heat with a nearly smokeless combustion. The small portion of sulphur they contain insures safety from spontaneous combustion on shipboard, so that they have become the ideal fuel for steamship and general naval purposes, and their use in these lines is constantly increasing." There seems to be no question but that New River coals in actual use bear out the tests, and may be depended on to give, under ordinary conditions of service, the highest possible results. The New River Coal Sales Co. is sole agent for the New River Peerless Coal, and it has issued the booklet above referred to. This company ships to tidewater over the Chesapeake & Ohio Railroad and loads at Newport News, Va., for transportation to other points for consumption in the production of steam for the operation of manufacturing plants and other industrial establishments, power-houses, steamships, etc. The New River Coal Sales Co. has its New York offices at 21 to 24 State street, Edward A. Willard being in charge. J. A. McGuffin, president of the company, has his office at Sewell, W. Va., in the mining district. Branch offices are also maintained in Boston, Richmond and Cincinnati.

#### The Red Book.

Now ready for distribution to subscribers is Knauer's Manufacturers of the United States, which is a classified and complete reference book for buyers and sellers for domestic and foreign trade. This is the fifth edition of the "Manufacturers of the United States Standard Reference Book," and will be found a revised, remodeled and greatly improved issue. The growing demand for this work, both at home and abroad, is an evidence of its high appreciation by the whole commercial community. It contains and concentrates the entire product of American manufacturers in one volume. It enumerates and classifies the names and addresses of all manufacturers in the United States, 512,734, together with their output of 52,596 articles of every known variety. This work, which was originally started in 1882 by the present compiler in the form of a small pamphlet of 46 pages, weighing three ounces, by constant additions and improvements has now attained the dimensions of a great volume of 2700 pages, weighing 12½ pounds. The demand for this book of reference has kept pace with its phenomenal growth until it is now universally used. In every corner of the globe where American goods are in demand the work has become a necessity. Hundreds of letters from all over the world testify to its extreme value in every mercantile home where it is in use. Its object is to furnish not only the most reliable and latest information of those identified in the manufacturing line, but to so arrange and classify them under their respective trade lists and articles as to render the book of practical use for ready reference to both buyer and seller. In the publication of this work the utmost care has been taken to make it thorough and complete, but in a field so enormously large and scattered, and one in which so many changes are constantly occurring, it is not to be expected that it will be free from errors or perfect in every detail. A careful and thorough revision, with the necessary changes and additions, is made every year.

The index of the classified list of headings has been carefully compiled and arranged in the most comprehensive form by means of cross reference headings. This valuable volume for the use of business men is more familiarly referred to as the Red Book, and it is published by the Manufacturers' Red Book Publishing Co., 225 Fourth avenue, New York city. It is loaned, not sold, and remains the property of the publisher, to whom it is finally returned according to agreement. Write the company at once if you are desirous of securing a copy of the volume for use in your establishment.

#### The Iron and Metal Trades.

The Iron Age in its weekly review says: "Our monthly blast-furnace returns reveal a continuance of the strong statistical position in the pig-iron industry. The February production, covering as it did only four weeks, was only 1,597,000 tons, as compared with 1,780,000 in January. It fell below the normal because a considerable number of plants were affected by troubles incident to the handling of materials in winter weather. Roughly, this amounts to about 25,000 to 30,000 tons, and it is a curious fact that the stocks in the hands of merchant furnaces declined about 25,000 tons. In other words, consumption apparently during February was proceeding at a rate which would have taken care of the normal output of the furnaces in blast. Productive capacity on March 1 was very close to that of February 1, so that for the present it is stationary. There is still some capacity available, but resumption is being hampered by the same causes which have slightly checked output.

"The fact of the extraordinary consumption of pig-iron, reflected in the statistics, is confirmed by the circumstance that melters very generally are ordering shipments freely and in some cases urgently. It is only in isolated instances that delays are demanded.

"While in the Eastern markets the feature is still the buying for prompt delivery in moderate quantities by the general foundry trade, the Western distributing markets report a larger movement among some of the leading melters, the jobbing foundries, however, participating also. Both Cincinnati and Chicago have been quite active. The Westinghouse interests in Pittsburgh have bought some round lots of charcoal and coke irons, the aggregate being fully 25,000 tons.

"For steel making the volume of purchases of pig has not been large. It is understood that the Steel Corporation may need 10,000 tons more for March, and there were indications of requirements aggregating 40,000 tons for April. These, however, will not come up at once. No buying on the part of this interest in the East has been done, and the alternative of starting the Troy furnaces is under consideration.

"There has been a further movement in steel rails. It is understood that the Atchison, Topeka & Santa Fe road has bought 25,000 tons, and that negotiations with the St. Paul and other Northwestern and some Southwestern roads are pending which will involve about 100,000 tons.

"In the structural trade an interesting new feature is the appearance of a considerable number of inquiries for steel buildings for manufacturing purposes. It is definitely known that about 22,000 tons of this class of work will soon be in the market.

"The enormous pressure upon the finishing plants of the leading producers from domestic sources has made it necessary to restrict export sales to the quantities absolutely necessary to maintain the foothold acquired in foreign territory. Thus, while during the last year the United States Steel Corporation was shipping abroad at one time at the rate of 100,000 tons per month, commitments are now being kept down to the rate of from 55,000 to 60,000 tons per month."



